

CONTRIBUTIONS
TO MANAGEMENT SCIENCE

Gérard Cliquet · George Hendrikse
Mika Tuunanen · Josef Windsperger
Editors

Economics and Management of Networks

Franchising, Strategic Alliances, and Cooperatives

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Economics and Management of Networks

Franchising, Strategic Alliances, and Cooperatives

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Table of Contents

Introducing 'Economics and Management of Networks'.....1
Josef Windsperger and Gérard Cliquet

PART A: FRANCHISING

Plural Form

Plural Form in Franchising: An Incomplete Contracting Approach 13
George Hendrikse and Tao Jiang

Franchisee Versus Company Ownership – An Empirical Analysis of Franchisor Profit.....31
Thomas Ehrmann and Georg Spranger

Existence of the Plural Form Within Franchised Networks: Some Early Results from the US and French Markets.....51
Rozenn Perrigot and Gérard Cliquet

Governance Structure Issues

The Governance Structure of Franchising Firms: A Property Rights Approach 69
Josef Windsperger and Askin Yurdakul

Governance Inseparability in Franchising: Multi-case Study in France and Brazil 97
Paulo F. Azevedo and Vivian L.S. Silva

Entrepreneurial Autonomy, Incentives, and Relational Governance in Franchise Chains.....117
Olivier Cochet, Julian Dormann, and Thomas Ehrmann

Beneficially Constraining Franchisor's Power 145
Thomas Ehrmann and Georg Spranger

Performance and Efficiency in Franchising

A Cointegration Analysis of the Correlates of Performance in Franchised Channels 169
Rajiv P. Dant, Manish Kacker, Anne T. Coughlan, and Jamie Emerson

Franchised Network Efficiency: A DEA Application to US Networks 191
Carlos Pestana Barros and Rozenn Perrigot

Entrepreneurship and Strategic Management Issues

Franchising as Entrepreneurial Activity: Finnish SME Policy Perspective 213
Mika Tuunanen

Creating Franchised Businesses Through Franchisee Training Program – Empirical Evidence from a Follow-up Study 235
Jenni Torikka

Understanding Strategic Interactions in Franchise Relationships 269
Evelien Croonen

PART B: STRATEGIC ALLIANCES

Governance Structure Issues

Administrative and Social Factors in the Governance Structure of European R&D Networks 293
Nieves Arranz and J. Carlos Fdez. de Arroyabe

Firm and Industrial Organization Frontiers: An Empirical Model of Inter-firm Network in the Winter Sports Industry 313
Rachel Bocquet

The Influence of Financial Institutions and Investor Behaviour on Company Management Practice 343
Tahir M. Nisar

International Audit Firms as Strategic Networks – The Evolution of Global Professional Service Firms 367
Hansrudi Lenz and Marianne L. James

Performance of Joint Ventures

International Joint Venture Performance: Impact of Performance Measures and Foreign Parent, Target Country and Investment Specific Variables on Performance.....393
Jorma Larimo

PART C: COOPERATIVES

Strategic and Governance Structure Issues

Orientation in Diversification Behavior of Cooperatives: An Agent-Based Approach 421
George Hendrikse, Ruud Smit, and Mark de la Vieter

Organization and Strategy of Farmer Specialized Cooperatives in China 437
Yamei Hu, Zuhui Huang, George Hendrikse, and Xuchu Xu

List of Contributors 463

Introducing 'Economics and Management of Networks'

Josef Windsperger and Gérard Cliquet[1]

The design and management of networks, such as alliances, franchising chains, cooperatives, joint ventures, venture capital relations and virtual organizations, have become very important research topics in the field of organizational economics and management in the last decade (Hendrikse 2003; Nooteboom 1999; Grandori 2004; Baker et al. 2004; Windsperger et al. 2004; Blair and Lafontaine 2005; Robinson 2005). The second international conference on Economics and Management of Networks (***EMNet***) took place at the *Corvinus University Budapest* from September 15 to September 17, 2005. ***EMNet***-conferences serve in promoting communication among researchers in economics and management of networks and should provide a forum to present current research and to discuss issues of common interest, such as relevant developments in organizational economics and management. A selection of theoretical and empirical papers from areas in economics and management of franchising, strategic alliances and cooperatives are published in this book.

The current trend in economics and management of networks is twofold: On the one hand, there is a strong tendency toward theoretical approaches developed in economics and management, such as property rights theory, agency theory, signalling theory, screening theory, transaction costs theory, resource-based and organizational capability theory, social exchange theory, tapered integration theory and population ecology theory. On the other hand, there is also a strong tendency toward the application of new research methods, such as agent-based modelling, cointegration analysis, data envelopment analysis, case study methods, time series studies as well as survival analysis.

Starting from this status of research the current book has two aims: First, the book emphasizes research in economics and management of networks as a theory-driven field by offering new theoretical perspectives on governance structure issues in franchising, alliances, venture capital relations and cooperatives. Second,

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the book is an effort to present new research results on efficiency and performance of franchising networks and joint ventures as well as on entrepreneurship and strategic issues in franchising and cooperatives. The book is structured as follows:

Franchising

- Plural form and governance structure issues
- Efficiency and performance measurement
- Entrepreneurship and strategic management issues

Strategic Alliances

- Governance structure issues in R&D-networks, inter-firm networks in the sports industry, investor-investee relations, and in global professional service firms
- Performance of joint ventures

Cooperatives

- Strategic and governance structure issues

Franchising

Franchising is a widespread organizational form viewed today as a source of economic dynamism and employment. It is tackled here through plural form, governance, performance, entrepreneurship and strategic issues.

Plural Form

Plural forms organizations are becoming increasingly more popular in retail and service chains as well as in the academic literature. Hendrikse and Jiang highlight positive externalities whereas Ehrmann and Spranger point out the positive influence of the plural form on the franchisor's profit. Perrigot and Cliquet present a first attempt by comparing this organizational form in two countries.

Hendrikse and Jiang model plural form franchising from an incomplete contracting perspective along the lines of Hart and Moore (1990). Plural form franchising is special because there are two decision rights regimes within one chain, i.e. local managers as employees of company-owned outlets and managers as employers/entrepreneurs of independent outlets, as well as different income rights for these two classes of network members. Compared to previous research (e.g. Shane 1998; Lafontaine and Slade 2001; Dant and Kaufmann 2003), they argue that not locational or other differences between units are necessary for the emergence of plural form franchising, but positive externalities being specific for the plural

form. Their results are compatible with the synergistic view of plural form (Bradach 1997; Cliquet 2000).

Ehrmann and Spranger examine ownership structures of franchise chains and evaluate their impact on franchisor profit. Specifically, they compare pure and plural forms of franchising. Empirical results of this study indicate the superiority of company-owned businesses over franchised units in generating franchisor profits. In addition, plural systems compensate for losses from franchising with profits from company units and outperform purely franchised competitors in overall profitability. Despite a clear financial inferiority of franchise outlets, franchisors do not convert plural structures into wholly-owned chains.

Perrigot and Cliquet compare the degree of plural form, as measured by the rate of company-owned units in franchise networks, between US and French retail and service networks. They show some important differences between US and France: Plural form is more broadly used in France than in the US, perhaps due to the difference in the territory area or for tax or social cost reasons. Plural form is more broadly used in the retail sector than in the service sector, perhaps due to the greater involvement of the franchisees towards their customers in the service sector. They conclude that the determinants of the plural form seem to vary according to the market characteristics; these results may support the monitoring cost hypothesis based on the agency theory.

Governance Structure Issues

Franchising has fascinated scholars for a long time as far as governance structure is concerned. Windsperger and Yurdakul add an ownership right approach and Azevedo and Silva the notion of portfolio of governance mechanism. Cochet, Dormann and Ehrmann show that chains counterbalance the loss of control inherent to autonomy with relational governance mechanisms. Ehrmann and Spranger emphasize a need for cooperation in the franchisor-franchisee relationships despite the freedom to behave opportunistically.

Windsperger and Yurdakul argue that previous studies in franchising research (Brickley et al. 1991; Lutz 1995; Shane 1998; Affuso 2002; Lafontaine and Shaw 2005) do not explain the governance structure of franchising firms as an institutional entity. This study fills this gap in the literature. According to the property rights view, an efficient governance structure of the franchising firm implies allocation of residual decision rights according to the distribution of intangible assets between the franchisor and the franchisee and transfer of ownership rights according to the distribution of residual decision rights. Windsperger and Yurdakul empirically investigate the influence of intangible knowledge assets on residual decision rights by using a logistic and ordinal regression model and the relationship between residual decision and ownership rights by using a simultaneous equation model on a sample of 83 firms from the Austrian franchise sector. The empirical results are supportive of the hypotheses.

Azevedo and Silva argue that the appropriate design of franchise contracts depends not only on the features of the transaction between franchisor and franchisees, but also on other transactions undertaken by the franchisor, particularly in upstream contracts, a hypothesis known as 'governance inseparability' (Argyres and Liebeskind 1999). Moreover, certain institutional environment features that affect the choice of governance mechanisms in the supply chain may indirectly influence the design of franchise contracts. In order to examine this hypothesis, they present a discrete structural analysis of 21 case-studies of food franchises in France and Brazil. Their main findings are that (a) firms choose a portfolio of governance mechanisms to govern their set of transactions, (b) upstream and downstream governance mechanisms are complementary, and (c) quality regulation and competition policy restrains upstream governance mechanisms, having an indirect effect on the design of the franchise contracts.

According to *Cochet, Dormann and Ehrmann,* franchisee autonomy not only fosters system-wide adaptability and outlet-owners' motivation but also raises the costs from agency problems present in franchisee-franchisor dyads. Advancing upon the understanding of agency issues involved in franchising, they test the argument that chains counterbalance the loss in control inherent to autonomy with relational governance mechanisms. The empirical results provide strong support for this hypothesis. In addition, they show that relational governance becomes more important the weaker agents' incentives are aligned with the interests of the entire network. The moderating effects of five franchisee characteristics influencing goal congruencies were considered: multi-unit ownership, age of the relationship, geographic distance, economic success, and the level of perceived intra-chain competition.

Ehrmann and Spranger analyse various forms of power and explain their asymmetrical allocation in the franchising network. They demonstrate how franchisors restore shifts in power that seem to disorder the desired balance by performing contractual, financial and organizational adjustments. The nature of these measures suggests that franchisors should cooperate with agents despite their freedom to behave opportunistically. According to the empirical results, the better a franchisor is able to credibly alleviate a franchisee's fear of being exploited by principal opportunism, the stronger the growth generated in the entire franchise system that embraces both the company-owned and the franchise arms.

Performance and Efficiency in Franchising

Measuring performance in franchised networks calls for specific methodologies depending on the definition given to the performance concept. Dant, Kacker, Coughlan and Emerson suggest a cointegration analysis, and Barros and Perrigot implement a DEA approach.

Dant, Kacker, Coughlan and Emerson present a cointegration analysis of the correlates of performance in franchise channels. Their investigation of the correlates of

performance contributes to the extant literature in three specific ways. Foremost, they attempt a systematic assessment of the relative effects of a series of firm decision variables on performance. Specifically, they evaluate the impact of four categories of drivers of performance. Besides three covariates, a total of eleven hypotheses focused on drivers of performance are investigated. Second, they utilize three different operationalizations of the dependent variable, performance, in their investigation. Finally, they estimate their empirical models using nine years of longitudinal panel data aimed at deciphering the effects associated with the set of predictor variables using cointegration analysis, a relatively new and advanced approach to modeling long term relationships between economic variables in panel data. The results show that seven out of eleven hypotheses were supported by the data using the system size operationalization of performance.

Barros and Perrigot examine the franchising network efficiency from the franchisor point of view through a DEA approach (Data Envelopment Analysis). Two main indicators of the franchisor revenues are used: The on-going franchising royalties and the franchising fee. Data concern the first 150 franchising networks of the Entrepreneur's 25 Annual Franchise 500® ranking (2004). The findings indicate that most of the networks are under-efficient and one of the main reasons for this stems from scale efficiency. In addition, a particular network is studied in depth. Four hypotheses are empirically tested.

Entrepreneurship and Strategic Management Issues

Tuunanen views franchising as an entrepreneurship activity being able to bring dynamism to small businesses, and Torikka shows the impact of training in this entrepreneurial process. Croonen investigates franchising as a strategic alliance between the partners under the exploration/exploitation trade-off. Croonen's view constitutes a link with the next part of the book.

Tuunanen's study takes an entrepreneurship viewpoint to franchising. To create a conceptual background, Tuunanen reviews past franchising literature and analyzes prior studies considering franchising as entrepreneurial activity. The current Finnish Entrepreneurship Policy Programme was utilized to explore the domain of entrepreneurship and franchising. The question is, how is franchising linked to the aims of the Entrepreneurship Policy Program and how could franchising potentially be used to foster SME activity in the Finnish economy? The literature analysis showed that prior franchising studies have rarely regarded franchising as a form of entrepreneurship. Likewise, theories explaining the birth, growth and survival of franchising are rather distant from entrepreneurship. However, recent franchising enquiries have taken an approach that comes closer to entrepreneurship. Franchising is a rapidly growing form of business and its importance in the economy increases. Tuunanen's investigation indicates that franchising has multiple features overlapping with the present small business policy agenda.

Torikka examines the impact of the Finnish franchisee training program on the creation of franchised businesses. The Finnish franchisee training program was a

unique training since it was government financed and provided to prospective franchisees by a third party. The organizing parties were the Finnish Employment and Economic Development Centres and a private consultation company specialized in franchising. The training program aimed to find people interested in becoming franchisees and to give them the essential skills and knowledge a franchisee needs. In total more than 200 trainees completed the ten programs held in 1999-2001. Those trainees comprise the initial sample of this follow-up study. The purpose of the study is to analyze the effectiveness of the franchisee training program as a part of the career decision-making process of the trainees. The results are interesting and encouraging – the impact of the training program was positively associated with becoming a franchisee or a stand-alone business owner.

Croonen investigates the complexity of how and why franchise partners as strategic alliance partners interact with each other given March's exploration/exploitation trade-off (March 1991). Croonen presents a research model that distinguishes five types of responses that partners may adopt in their relationships. The empirical part consists of a case study which focuses on two 'strategic change trajectories' (SCTs) in a franchise system in the Dutch drugstore industry. This paper discusses what responses franchisees adopted in a reaction to the introduction of these SCTs by the franchisor, what responses the franchisor adopted toward these franchisees in turn, and why both partners adopted these responses. The paper concludes by adding a new response type to the current response typology, and by providing insight in why franchise partners adopt certain responses.

Strategic Alliances

Strategic alliances, such as R&D networks, inter-firm alliances in the winter sports industry, investor-investee relations in the private equity sector and the network structure of international audit firms, are examined through governance and performance issues at the national and international level.

Governance Structure Issues

Arranz and de Arroyabe analyse governance structures used to organize partnerships in R&D networks emphasizing the degree of administrative and social factors they embody. They characterize the forms of governance in terms of the applicability of the technology managed in the networks. To do so, a set of factors were selected and grouped into two categories. Structural or administrative factors selected have been planning criteria, decision-making and organization of activities. The social factors chosen were the degree of cohesion and openness of network. These forms of governance were tested in a sample of European R&D networks where firms and research organizations were involved during the period 1990- 1999. Their findings show that two kinds of networks exist in which administrative

structures as well as the openness and cohesion of the R&D network have different relevance in governance structures.

Bocquet presents a model of inter-firm network in the case of the winter sports industry that is based on two theoretical perspectives of networks: The first one is the transaction costs tradition (Williamson 1991) which considers the network as a hybrid form. The second one is the French theory of conventions (Favereau 1989) yielding another vision of inter-firm network as a collective and non-contractual governance structure. With these two conceptions, they construct two business network archetypes: In the star network, actors seek efficiency and are linked by bilateral contractual agreements. By opposition, the community network aim at creating new productive solutions where "scattered" actors are engaged in a learning process. Multilateral and non-contractual relations are guiding their path. Bocquet shows that these two networks are complementary. Thus, skiing resorts can no longer be seen as autonomous organizations with spatial boundaries. Their frontiers are extended to the contractual or conventional arrangements which characterize the new winter sports industrial organization.

Nisar analyses the influence of financial institutions and investor behaviour on company management practice. Nisar examines these investor-investee relationships, drawing upon eight private equity fund case studies and eight case studies of portfolio companies funded by private equity finance. The findings empirically confirm the importance of organizational structure for the process of investor engagement ('engagement approach'). Nisar shows that independent and more specialized investors are much more involved with their companies than captives. Experienced and knowledgeable partners are also more likely to offer advice and support services. Nisar also finds examples of investor influence in company management in areas such as strategy, human resource management and performance evaluation.

According to *Lenz and James*, the organizational structure of international audit firms can be characterized as a specific form of a strategic network (Sydow 1993). Networks of audit firms are a prime example of hybrid governance structures between markets and hierarchies and are organized by contractual relationships between legal and economically autonomous partnership entities from different countries. Lenz and James describe the governance structure of international audit firm networks and analyse how coordination and incentive problems, e.g. hold-up and moral hazard situations, are dealt with in these network structures. They argue that exclusive rights, referral work, brand names, network-specific investments, and profit pooling are means to ensure that network members cooperate.

Performance of Joint Ventures

Larimo investigates the impact of foreign parent, target country and investment specific variables on the performance of international joint ventures. Based on the literature review (e.g. Robson et al. 2002; Reus and Richie 2004), Larimo develops fourteen hypotheses of the impact of foreign parent, target country, and

investment strategy specific variables on performance. The empirical part of the paper is based on a sample of over 720 international joint ventures established by more than 130 Finnish companies in over 60 foreign countries during period 1970-2001. The study is the first large scale study focusing on IJV performance of firms originating from any of the Nordic countries (sample size over 250 cases). The most significant variables are the international experience and the degree of diversification of the Finnish firms, unit unrelatedness, and the individualism dimension of culture.). In addition, Larimo shows that the results depend on the selected measures of performance, such as longevity, survival, and stability.

Cooperatives

Last but not least, cooperatives are studied through governance and strategic issues.

Strategic and Governance Issues

Hendrikse and Smith use an agent based simulation to better understand strategic portfolios of cooperatives. Hu, Huang, Hendrikse, and Xu discuss the organization form of cooperatives in China in a global economy.

Hendrikse, Smith and de la Vieter ask the question why the diversification profiles of cooperatives and investor-owned enterprises differ. They focus on the relationship between the orientation (perspective and cognition) of the agents in different governance structures and the evolution of the diversification portfolio. The limited cognition/bounded rationality of individuals and organizations inevitably entails that only a few aspects of the world can be grasped, while many others are ignored. They adopt a partitioning approach in an agent based simulation environment, using the methodology of cellular automata, in order to capture by the notion of orientation the stylized facts formulated by Teece et al. (1994).

Hu, Huang, Hendrikse and Xu examine the organization of the new farmer specialized cooperatives in China. Are Chinese cooperative organizations a feasible organizational form to the organization of farmers in an increasingly global agri-food supply chain? They address this question from the perspective of systems of attributes (Milgrom and Roberts 1995), like decision rights, income rights, quality control systems and branding. To answer this question, they use the data (a) regarding the historical development of farmer cooperatives in China, (b) regarding the membership composition of a sample of 66 farmer cooperatives in the Zhejiang province; and (c) regarding the various attributes (governance, quality control system, and strategy) of a watermelon cooperative in this province. The data indicate that cooperatives exhibit substantial heterogeneity, in terms of farmers being member and skewness in the distribution of control rights. Human asset specificity in terms of establishing and maintaining relations and access to markets seems to be more important than physical asset specificity in accounting for governance structure choice in the current institutional setting.

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PART A:

Franchising

Plural Form
Governance Structure Issues
Performance and Efficiency in Franchising
Entrepreneurship and Strategic Management Issues

Plural Form in Franchising: An Incomplete Contracting Approach

George Hendrikse and Tao Jiang[1]

Abstract. Plural form franchising is modeled from an incomplete contracting perspective. Complete franchising is the unique, efficient governance structure only when the plural form externality is limited and the costs of investment are low for both franchisees. Governance structure choice is irrelevant when the costs of investment are high for all franchisees, because no franchisee will invest. Finally, a plural form governance structure is the unique, efficient equilibrium in all other cases because the power allocated to independent franchisees makes them confident that they will be able to recoup their investments. Not locational or other differences between units are necessary for the emergence of plural form franchising, but positive externalities being specific for the plural form.

Keywords. Incomplete contracting, franchising, plural form

1 Introduction

A franchise is a vertical relationship between a franchisor and many franchisees. Combs et al. (2004, 907) define that "In franchising, one firm (the franchisor) sells the right to market goods or services under its brand name and using its business practices to a second firm (the franchisee)". Franchising is an important phenomenon. In 1998, there were nearly $850 billion in sales of franchised goods and services at over 700,000 US franchise locations. And in the year 2000, franchises made up an estimated $1 trillion in annual retail sales (Franchise Funding, 2004). According to Michael (1996), sales through franchise have accounted for a significant portion in the following industries: printing and copying (71% of sales), tax preparation (67%), specialty food retailing (55%), restaurants (46%).

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Various aspects of franchising are not well understood. Hendrikse and Windsperger (2004) identify topics like governance of franchises (bottom-up franchises, plural form), Gibrat's law, cognition, and complementarities. This article will focus on plural form franchising. It entails that some outlets are owned by franchisor, while other stores are owned by franchisees. Standard economic theory predicts the convergence of governance structures over time, i.e. the selection process of the market winnows out the efficient governance structure. Accordingly, some authors (e.g. Gallini and Lutz 1992; Scott 1995; Oxenfeldt and Kelly 1969; Caves and Murphy 1976; Norton 1988) argue that the dual ownership structure is a transitory phenomenon. They predict that in the long run, one organizational structure, either wholly owned or wholly franchised will prevail and dominate. Explanations based on resources constraint, either capital, managerial talent, or local market information, predict that as the chains become mature, the percentage of company owned outlets should increase (Oxenfeldt and Kelly 1969; Caves and Murphy 1976; Norton 1988). On the contrary, signaling theory gives an opposite prediction (Gallini and Lutz 1992; Lafontaine 1993). In reality, however, we often observe a relatively stable distribution of franchise and company-owned outlets within one network (Lafontaine and Shaw 2005).

Horizontal as well as vertical externalities exist in franchising networks (Williamson 1981; Dnes 1993; Dnes and Garoupa 2005). These externalities can be also negative or positive. The most prominent example of a negative externality is free-riding in franchises. Free-riding originates from opportunistically using the common brand name by the various franchisees (Caves and Murphy 1976; Rubin 1978; Klein 1980). For example, on one hand a franchisee may horizontally free ride upon other franchisees' efforts (Rubin 1978), and on the other hand he may vertically free ride upon the franchisor's system-wide promotional efforts as well (Mathewson and Winter 1985). There are also positive externalities, like organizational learning and innovation (Bradach 1997, 1998; Sorenson and Sørensen, 2001; Lewin-Solomon 1999; Cliquet and Nguyen 2004).

These externalities depend on the choice of single or plural form franchising. Bradach (1998) examines complementarities between the company-owned and franchised units. He argues that plural form may help franchise networks to overcome four strategic challenges: (1) growth; adding new franchised units may help franchisors to overcome growth constrains, (2) uniformity; a ratcheting process is created in franchising chains, where company-owned units and franchised units set performance benchmarks for each other, (3) local responsiveness; which is enhanced by the franchisee's local response to local customers and the market-pressure processes, and (4) system-wide adaptation to change; it is improved by the mutual learning process because plural form can generate more diverse ideas. Franchisees are influenced by the commitment and the results of company-owned units; and the company-owned units benefit from the challenge and post decision insights offered by the franchised units. So, the plural form may be superior to the single form because it leverages the strengths and ameliorate the weaknesses of each single form in order to maintain quality

and homogeneity of the business concept throughout the entire franchise, while promoting innovation at the same time.

Sorenson and Sørensen (2001) explain plural form in franchising from the perspective of exploration and exploitation paradox. Franchisees have more incentives to "exploration" and company managers are more possible to be "exploitation". In the context of franchising, 'exploration' refers to the capabilities of innovation and local market knowledge learning, while 'exploitation' refers to the capabilities of controlling quality and executing administrative exercises. The mix of company-owned units and franchised units can affect the balance between centralization and standardization through organizational learning, thereby enhancing the franchise chain's efficiency and performance.

There are also literatures arguing that a plural form franchise has an advantage over a single form arrangement regarding innovation. Lewin-Solomon (1999) argues that franchisors keep a proportion of company-owned units as a commitment device in order to give franchisees enough incentives to innovate. As the interest of the franchisor is aligned with the franchisees', the franchisor can testify the innovations' profitability by testing them first in company-owned units, thereby persuading franchisees to implement it. Cliquet and Nguyen (2004) stress that plural form plays an important role in the three stages of innovation process, such as innovation generation, innovation testing and innovation implementation. They argue that franchisees are quite important in generating new ideas because they are closer to local markets and have higher incentives to improve performance than the company managers. On the other hand, company-owned units are considered to be important in testing and implementing the innovations.

This article addresses dual distribution in franchising from a governance perspective. Governance concerns the organization of transactions, whereas a governance structure consists of a collection of rules structuring the transactions between the various stakeholders. Franchising is an example of a governance structure. It is a vertical relationship between parties in two stages of a production chain. Other examples of governance structures are investor owned enterprises, worker-controlled firms, cooperatives, mutuals, joint ventures, networks, foundations, and public enterprises.

A standard way of delineating a governance structure is to distinguish income and decision rights (Hansmann 1996).[2] Income rights address the question 'How are benefits and costs allocated?' i.e. they specify the rights to receive the benefits, and obligations to pay the costs, that are associated with the use of an asset. For example, a franchise has to choose the level of the royalty rate and the franchise fee. Other important themes regarding income rights are financing, cost allocation schemes, and the effects of horizontal as well as vertical competition.

Decision rights in the form of authority and responsibility address the question 'Who has authority or control?', i.e. they concern all rights and rules regarding the deployment and use of assets. Governance is relevant next to (formal) contracts be-

[2] Saloner et al. (2001) uses the distinction incentives and authority.

cause contracts are in general incomplete, due to the complexity of the transaction or the vagueness of language.[3] Contractual incompleteness is dealt with by (the choice of) organization because it allocates authority to somebody to decide in circumstances not covered by the contract. Important themes regarding authority are its allocation ('make-or-buy' decision), formal versus real authority, relational contracts, access, decision control (ratification, monitoring), decision management (initiation, implementation), task design, conflict resolution, and enforcement mechanisms.

The focus in this article is on the allocation of decision rights in franchises. There are system-specific assets, like the brand name, and decisions have to be taken regarding the network's production, marketing, and service in order to improve its brand name value and maintain system-wide standardization. There are also local-specific assets, like knowledge about the local market, and decisions have to be taken regarding local operations. Plural form franchising is special because there are two decision rights regimes within one organization, i.e. local managers as employees of company-owned outlets and managers as employers/entrepreneurs of independent outlets, as well as different income rights for these two classes of franchisees.

Transaction cost economics argues that the cost differences that are measured by asset specificity, frequency and uncertainty may explain the different ownership structure of the individual units. Brickley, Dark and Weisbach (1991), Gallini and Lutz (1992), Mathewson and Winter (1994) and Lutz (1995) point out the importance of ownership in determining the incentives under different structures. Primarily the influence of transaction specificity on the tendency toward vertical integration by company-owned units was investigated. The risk of opportunism by the franchisor is reduced by the franchisee's outlet-specific investments; as a result, the percentage of company-owned units decreases.

According to the property rights theory, the allocation of residual income rights depends on the importance of intangible system-specific and local market assets. The percentage of company-owned outlets (PCO) is expected to be higher when franchisor's intangible assets are more important than franchisee's intangible assets for generating residual income, because more property rights should be transferred to franchisor. Therefore, PCO is positively related to the intangible system-specific assets and negatively related to the intangible local market assets. Ownership redirection cannot be accomplished because of the non-contractibility of both franchisor and franchisee's intangible assets, and consequently leads to a stable dual distribution of company-owned and franchised outlets (Windsperger 2004). Franchising increases franchisors' and franchisees' ex ante incentives; and at the same time it also creates ex post incentive conflicts between them. Under a dual ownership structure, the allocation pattern of decision rights may alleviate the in-

[3] Contracts are usually distinguished between complete and incomplete contracts (Hart 1995). Complete contracts specify all relevant aspects of an exchange, whereas an incomplete contract assigns authority to somebody to decide in circumstances not covered by the formal contract.

centive conflicts. For example, franchisee receives higher investment incentive from a low royalty, which weakens franchisor's incentive. Franchisor may compensate these disincentive effects through keeping a proportion of company-owned outlets (Windsperger and Yurdakul 2005).

In this article, an incomplete contracting model of dual distribution in franchising is presented along the lines of Hart and Moore (1990). Three parties are distinguished: the franchisor with investment opportunity of value A, a franchisee with investment opportunity of value B and a franchisee with investment opportunity of value C (>B). A parameter σ captures an externality being specific to the plural form. Complete franchising is the unique, efficient governance structure only when the plural form externality is limited and the costs of investment are low for both franchisees. Governance structure choice is irrelevant when the costs of investment are high for all franchisees, because no franchisee will invest. Finally, a plural form governance structure is the unique, efficient equilibrium in all other cases because the power allocated to independent franchisees makes them confident that they will be able to recoup their investments. Not locational or other differences between units are necessary for the emergence of plural form franchising, but positive externalities being specific for the plural form.

The paper is organized as follows. Section 2 presents the model. In section 3, the incentive to invest is determined for each party in each governance structure. Section 4 addresses the choice of governance structure. Section 5 concludes.

2 Model

The choice of governance structure and the incentive to invest is analyzed from an incomplete contracting perspective. The incomplete contracting perspective argues that a distinction has to be made between observable and verifiable actions, i.e. not all observable actions are also verifiable by a third party (Grossman and Hart 1986). Only verifiable actions can be included in a meaningful contract. The classic incomplete contracting model of Hart and Moore (1990) consists of a non-cooperative game of two stages: a governance structure stage and an investment stage. The choice of governance structure determines the bargaining strength of each party in the first stage, while bargaining positions are determined by the choice of the level of investment in the second stage. The relationship between the first and the second stage is that the allocation of bargaining power by the choice of governance structure in the first stage determines the incentive to invest in the second stage.

We consider the choice of franchising or company ownership in a two-store chain. Three parties are distinguished: a franchisor choosing to produce a brand / trademark of value A, a franchisee deciding to add value B to the product / service of the franchisor, and a franchisee deciding to add value C (>B) to the product / service of the franchisor. Figure 1 presents these three parties. The top box is the franchisor, while the bottom-left (right) box is franchisee B(C).

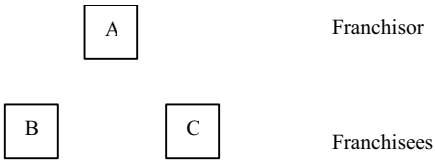


Fig. 1. The three parties

The focus is on the ownership of the local units and the trademark. Figure 2 distinguishes four governance structures. Governance structure I entails that all outlets are company owned. There are two plural form governance structures. The high value franchisee is independent in governance structure II, while the low value franchisee is independent in governance structure III. All franchisees are independent in governance structure IV. A cross in a box indicates that this party has the residual control / power / authority to decide in unforeseen circumstances (Grossman and Hart 1986; Hart and Moore 1990).

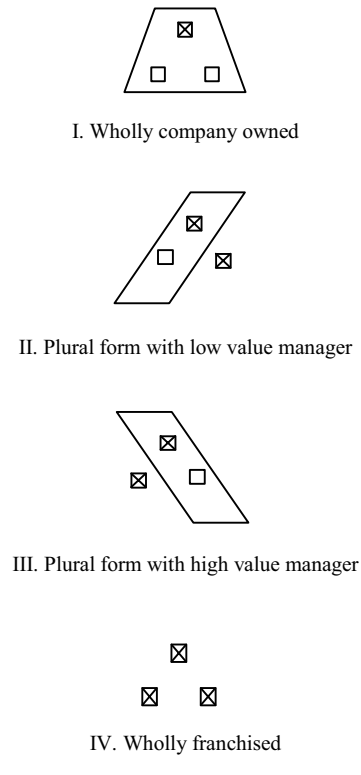

I. Wholly company owned
II. Plural form with low value manager
III. Plural form with high value manager
IV. Wholly franchised

Fig. 2. Four governance structures

It is assumed that both parties sell one unit of the product. They decide only about adding additional value to the product. A parameter σ is introduced to capture positive externalities being specific to the plural form as described by Bradach (1997), like system wide learning (σ > 1) and competition / ratcheting / benchmarking (σ > 1). (The case σ < 1 will also be analyzed, i.e. negative externalities being specific to the plural form.) Define x_1 (x_2, x_3) as the sunk costs by the franchisor (franchisee B, franchisee C), where x_i is either 0 or 1. Table 1 summarizes these ingredients of the model by presenting the characteristic function form when all parties invest for all governance structures (G).

Table 1. Characteristic function form when all parties invest

x	(1,1,1)	(1,1,1)	(1,1,1)	(1,1,1)
G	I	II	III	IV
v(1)	A+B+C	A+σB	A+σC	A
v(2)	0	0	σB	B
v(3)	0	σC	0	C
v(12)	A+B+C	A+σB	A+σB+σC	A+B
v(13)	A+B+C	A+σB+σC	A+σC	A+C
v(23)	0	σC	σB	B+C
v(123)	A+B+C	A+σB+σC	A+σB+σC	A+B+C

3 Investment

This section consists of two parts. Section 3.1 determines the payoff for each player in every governance structure when all parties invest. Section 3.2 presents the subgame perfect equilibrium investment choices.

2.1 Investment Incentives

The characteristic functions of the previous section determine the incentive to invest. We use, like Hart and Moore (1990), the Shapley value (Shapley 1953) in order to determine the value of each player in each governance structure for all combinations of investment decisions. These values / payoffs reflect the distribution of bargaining power. The economic interpretation of the Shapley value is that it provides a measure for the incentive intensity to invest. Table 2 presents the Shapley values belonging to the characteristic functions of table 1.

Table 2. Shapley values when all parties invest

x	G	Shapley value franchisor	Shapley value franchisee B	Shapley value franchisee C
(1,1,1)	I	A+B+C	0	0
(1,1,1)	II	A+σB	0	σC
(1,1,1)	III	A+σC	σB	0
(1,1,1)	IV	A	B	C

2.2 Investment Choices

The above results are incomplete regarding the choices that will be made by the various parties. The reason is that the investment decisions are exogenous. The costs of investment have to be taken into account in order to determine the investment decisions. Define k_1 (k_2, k_3) as the sunk costs by the franchisor (franchisee B, franchisee C). All payoffs in the game are now specified. Appendix 1 depicts the extensive form of the game. The subgame perfect equilibrium investment decisions are determined by the method of backward induction. These decisions and the associated payoffs are presented in figure 3 (when $k_1 \leq A$ and $\sigma>1$).[4][5]

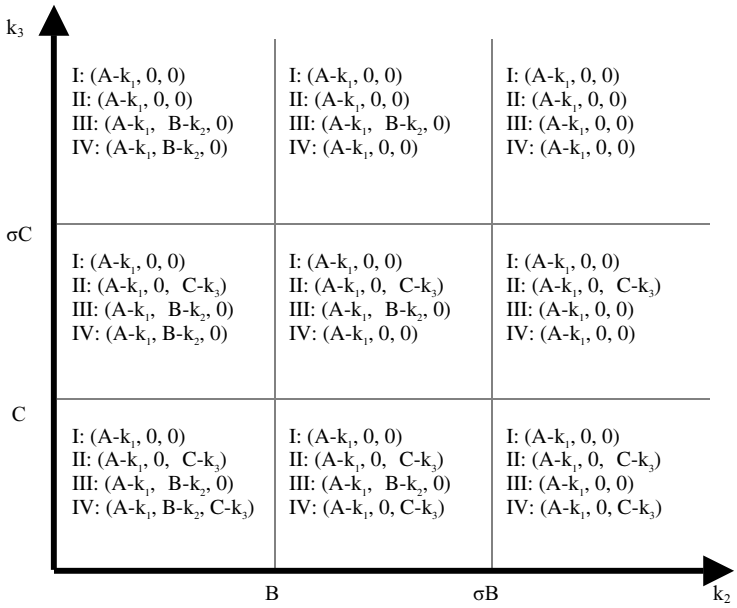


Fig. 3. Subgame perfect equilibrium payoffs when $k_1 \leq A$ and $\sigma>1$

[4] The case $k_1 > A$ is presented by replacing the payoff $A-k_1$ of the franchisor by 0 in all governance structures in figure 3.

[5] The case $\sigma < 1$ is presented in appendix 2.

4 Efficient Governance Structure

This section formulates results regarding the efficient governance structure choice in the first stage of the game. Efficiency of a governance structure entails that the sum of the payoffs of the three players in this governance structure is at least as high as the sum of the payoffs of the three players in any other governance structure. We limit ourselves to the case $k_1 \leq A$ and $\sigma>1$.

The efficient governance structure choice, and its feasibility, is determined by figure 3. All governance structures are efficient in the north-east rectangle, i.e. they all result in a surplus of $A-k_1$. The franchisor is the only party investing in specific assets because its costs of investment are sufficiently low. Governance structure III is the unique efficient governance structure in the north-west and north rectangle (because $\sigma B-k_2 > B-k_2 > 0$). The franchisor invests again in every governance structure. Franchisee C never invests when $k_3 > \sigma C$ because the costs of investment are too high. This is efficient. Franchisee B does not invest in the governance structures I and II because there is no incentive to invest due to the lack of power. These governance structures are inefficient because the value generated by franchisee B is larger than its costs. However, franchisee B invests in the governance structures III and IV because sufficient power is allocated to this franchisee. Governance structure III is the unique efficient governance structure because it generates the dual distribution externality, whereas governance structure IV does not. A similar reasoning applies to governance structure II being uniquely efficient in the east and south-east rectangle.

Governance structure I is never efficient in the remaining four rectangles, while governance structure IV is only efficient for certain parameter values in the

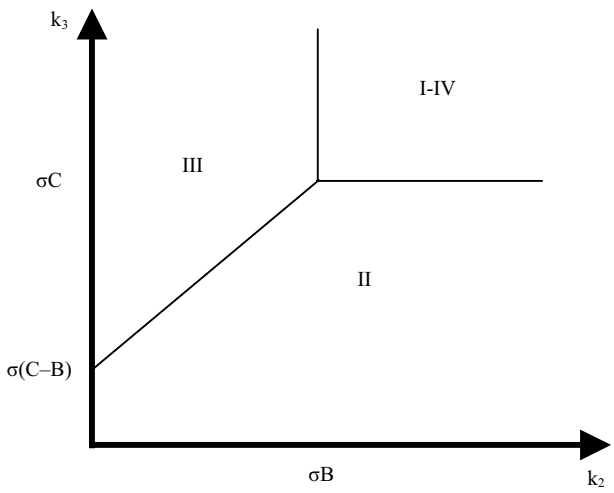


Fig. 4. Efficient governance structures when $\sigma \geq 1+B/C$

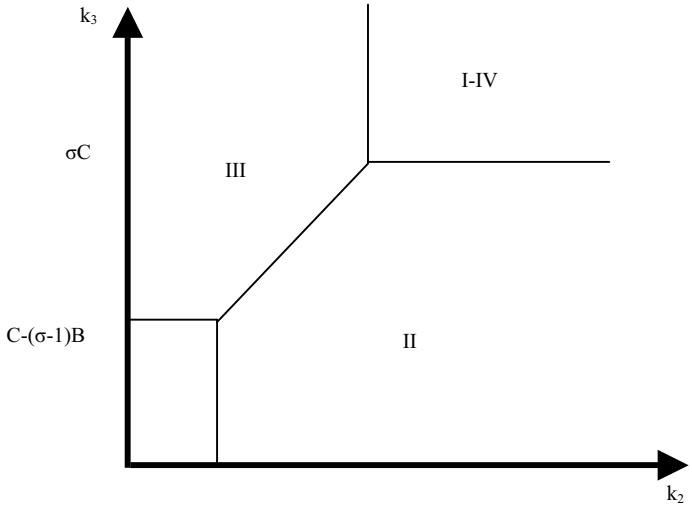


Fig. 5. Efficient governance structures when $1 < \sigma < 1+B/C$

south-east rectangle. Governance structure IV is efficient when $\sigma B-k_2 < B-k_2+C-k_3$ and $\sigma C-k_3 < B-k_2+C-k_3$, i.e. $k_3 < C-(\sigma-1)B$ and $k_2 < B-(\sigma-1)C$. Figure 4 presents the situation where $B-(\sigma-1)C < 0$, i.e. there are substantial positive dual distribution externalities.[6] There are no parameter values for which governance structure IV is the unique efficient governance structure. The intermediate investment incentives for both franchisees in governance structure IV are not strong enough to override the strong investment incentives for either franchisee B in governance structure III or franchisee C in governance structure II.

Governance structure II is the unique efficient governance structure in the south-east. It discourages efficiently investment by franchisee B with its relatively high costs of investment, while franchisee C invests and generates the dual distribution externality. The reverse holds in the north-west. Governance structure III is efficient because discourages investment by franchisee C with its relatively high costs of investment, while franchisee C invests and generates the dual distribution externality.

Figure 5 presents the efficient governance structure choices when $B-(\sigma-1)C > 0$. The intermediate investment incentives for both franchisees in governance structure IV create more value than the strong investment incentive for either franchisee B in governance structure III or franchisee C in governance structure II when the plural form externality is limited.

The above results will now be summarized in a number of results.

Result 1: Governance structure I is never a unique efficient governance structure.

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[6] The upward sloping line in the figures 2 and 3 is characterized by $k_3=\sigma(C-B)+k_2$.

Explanation: The franchisees have no power in governance structure I, and therefore no incentive to invest. Governance structure I is only as efficient as the other governance structures when the costs of investment discourage investment by all franchisees in all governance structures.

Result 2: Governance structure II is the unique efficient governance structure choice when $\sigma > 1$, k_2 is above a certain level, and k_3 is below a certain level.

Explanation: Franchisee B will not invest because its costs of investment are too high, regardless whether it has power or not. The costs of investment of franchisee C are low, but some power is needed in order to cover these costs. Governance structures III and IV remain. Governance structure III strictly dominates governance structure IV when there are positive plural form externalities, i.e. $\sigma > 1$.

Result 3: Governance structure III is the unique efficient governance structure choice when $\sigma > 1$, k_2 is below a certain level and k_3 is above a certain level.

Explanation: Similar to the explanation of result 2.

Result 4: Governance structure IV is the unique efficient governance structure choice when k_2 and k_3 are small and $\sigma < 1+B/C$.

Explanation: The attractiveness of governance structure IV is that both franchisees have an incentive to invest because each of them has power. However, the positive plural form externality is not captured. Governance structures II and III have the advantage of generating the positive plural form externality, but only the independent franchisee invests. The value of having both franchisees investing dominates the generation of the plural form externality by one investing franchisee when plural form externality is not too high.

Result 5: Governance structure IV is never a unique efficient governance structure choice when $\sigma > 1+B/C$.

Explanation: The reverse of the explanation of result 4.

Result 6: Plural form franchising, i.e. either governance structures II or III, is the unique efficient governance structure for the parameter values specified in the results 2 and 3, even when $B = C$.

Explanation: This result covers special cases of the results 2, 3 and 5. The value generated by the independent franchisee in a plural form governance structure is higher than the value generated by either one or two franchisees in governance structure IV. This result shows that it is not necessary for the emergence of the plural form that there are locational differences, or other differences between the franchisees. System wide externalities are responsible for the plural form being a unique, efficient governance structure.

Result 7: If $\sigma=1$, then governance structure IV is efficient for all values of the parameters k_2 and k_3.

Explanation: Figure 6 illustrates the result. Governance structure IV is always efficient because the incentive to invest for each franchisee in governance structure IV is always at least as strong as in the governance structures I-III. This result indicates that the positive plural form externality is crucial for a plural form governance structure to be a unique, efficient governance structure.

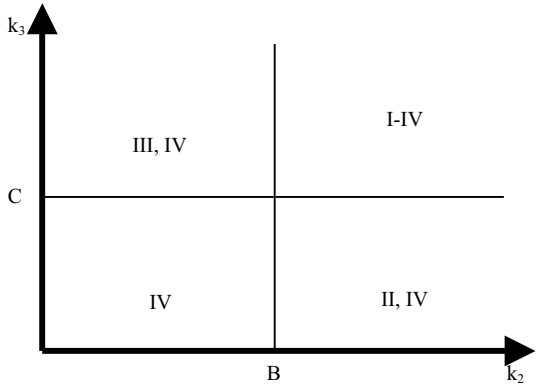


Fig. 6. Efficient governance structure choice when $\sigma = 1$

5 Conclusions and Further Research

Lutz (1995, 129) stated: 'A multiple unit model can determine whether locational differences are necessary for dual distribution, or whether dual distribution can arise as a solution for incentive problems even when all units are ex ante identical. The most important extension will be to examine the choice of ownership for individual units within a multiple-unit chain. Since we observe franchise relationships almost exclusively in these chains, this extension is crucial for developing empirical predictions'. We have presented a multiple unit model with the plural form being a unique, efficient governance structure. Not locational or other differences between units are necessary for the emergence of plural form franchising, but positive externalities being specific for the plural form.

Our model is too simple to capture the richness of franchising practices. For example, Lutz (1995, 129) continued: 'Such a multiple-unit model should have several key features. First, at least some of the central firm's effort creates a public good: improvements in the trademark will increase profits at all stores in the chain. Second, any local manager's action may also affect the profits at other units: this will be the case when a local manager's action affects the value of the trademark. Thus incentives for all parties are interdependent.' These two features are not incorporated is the current model. However, these and other several extensions are possible.

First, notice that the parameter σ depends in the current model on governance structure, but in rudimentary way because σ(G)= σ when G=II, III or σ(G)= 1 when G=I, IV. There are various possibilities to model the parameter σ as the outcome of an equilibrium process, where σ is either smaller, or equal, or larger than one, like the modelling of 'ratcheting' by the literature regarding relative compensation (Lazear and Rosen 1981; Green and Stokey 1983), or complementarities along the lines of Bradach (1997) by the systems of attributes literature (Holmstrom and Milgrom 1991, 1994). This extension entails that an additional stage is added between the current two stages of the game. Second, the percentage of company owned outlets can be only one of three levels in our model in the various governance structures, i.e. 0% (IV), 50% (II, III), or 100% (I). Incorporating more franchisees will allow for more variability regarding the percentage of company owned outlets.

Third, the focus has been on the allocation of decision rights. However, many authors refer to the monitoring and free riding problems in franchising. The relationship between these income rights aspects of franchising and the plural form has to be determined. A similar observation holds regarding the use of royalty rates.

Fourth, the extent of incompleteness is not endogenous. A franchise has to decide how much discretion is assigned to the activities of the franchisees. The standard way of dealing with this issue in franchises is the choice of the business format. Given the business format content in our model and making it endogenous along the lines of Tadelis (2002) is a challenging line of research. The extent of coverage of the business format may turn out to vary with the choice of governance structure.

Fifth, Lafontaine and Shaw (2005) highlight the importance of the trademark in dual distribution franchises. Their empirical evidence indicates that there is a strong tendency that the number of company-owned outlet increases when the value of the brand/trademark (A) increases. The comparative statics results in the current model are independent of the value (A) of the brand. However, if other governance structures are also taken into consideration, e.g. mirror images regarding authority of governance structures I-III in figure 2, then our model may be able to account for this relationship between the value of the brand and governance structure choice. This will be a topic for future research.

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Appendices

Appendix 1: Extensive Forms

The first stage of the game consists of the choice of governance structure. There are four possible choices. The second stage of the game consists of the investment decisions of the three players. Each player decides between investing or not investing in specific assets. The sequence of their decisions does not matter in our specification of the payoffs. We depict the choice of the franchisor first, subsequently the choice of franchisee B, and finally the choice of franchisee C. The total number of choice sequences is therefore 4x2x2x2=32. The extensive form is presented in the figures 7-10 due to this large number of possible decision sequences. The payoffs are based on table 2. The payoffs below branch YYY are composed of revenues and costs. The revenues are taken straight from table 2, while each player carries it costs of specific investments. Similarly, branch NYN corresponds to investment vector (0, 1, 0), i.e. only franchisee B invests. Benefit B is generated and taken by the franchisor, while franchisee B carries the costs k_2.

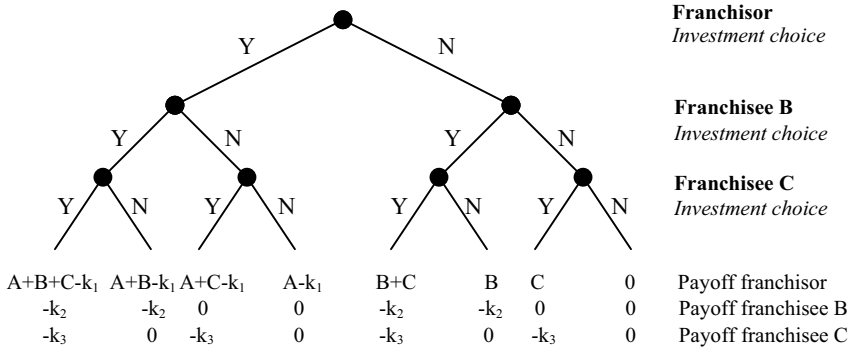

Franchisor
Investment choice
Franchisee B
Investment choice
Franchisee C
Investment choice
Y
N
A+B+C-k1 A+B-k1 A+C-k1 A-k1 B+C B C 0 Payoff franchisor
-k2 -k2 0 0 -k2 -k2 0 0 Payoff franchisee B
-k3 0 -k3 0 -k3 0 -k3 0 Payoff franchisee C

Fig. 7. Extensive form when governance structure I has been chosen

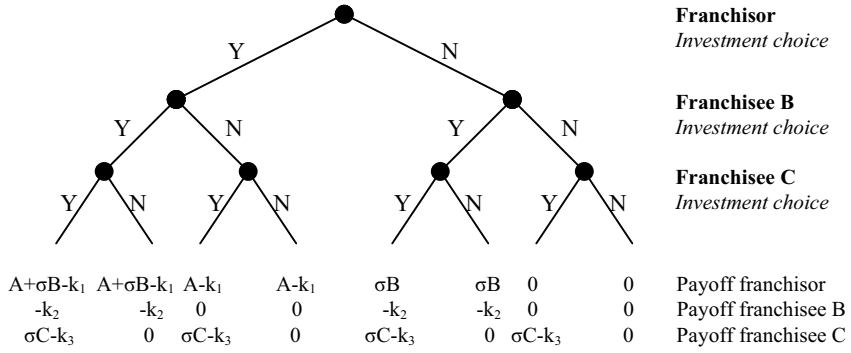

Franchisor
Investment choice
Franchisee B
Investment choice
Franchisee C
Investment choice
Y
N
A+σB-k1 A+σB-k1 A-k1 A-k1 σB σB 0 0 Payoff franchisor
-k2 -k2 0 0 -k2 -k2 0 0 Payoff franchisee B
σC-k3 0 σC-k3 0 σC-k3 0 σC-k3 0 Payoff franchisee C

Fig. 8. Extensive form when governance structure II has been chosen

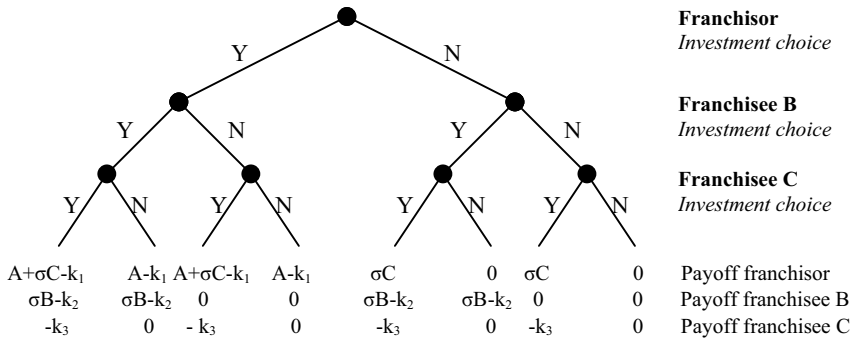

Franchisor
Investment choice
Franchisee B
Investment choice
Franchisee C
Investment choice
Y
N
A+σC-k1 A-k1 A+σC-k1 A-k1 σC 0 σC 0 Payoff franchisor
σB-k2 σB-k2 0 0 σB-k2 σB-k2 0 0 Payoff franchisee B
-k3 0 - k3 0 -k3 0 -k3 0 Payoff franchisee C

Fig. 9. Extensive form when governance structure III has been chosen

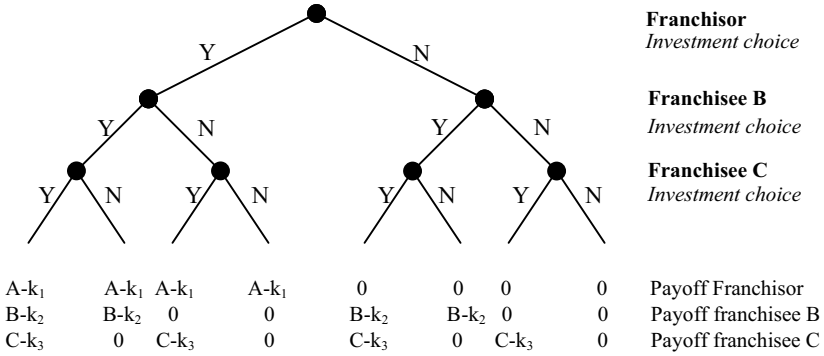

Franchisor
Investment choice
Franchisee B
Investment choice
Franchisee C
Investment choice
Y
N
A-k1 A-k1 A-k1 A-k1 0 0 0 0 Payoff Franchisor
B-k2 B-k2 0 0 B-k2 B-k2 0 0 Payoff franchisee B
C-k3 0 C-k3 0 C-k3 0 C-k3 0 Payoff franchisee C

Fig. 10. Extensive form when governance structure IV has been chosen

Appendix 2: Subgame Perfect Equilibrium Payoffs When σ<1

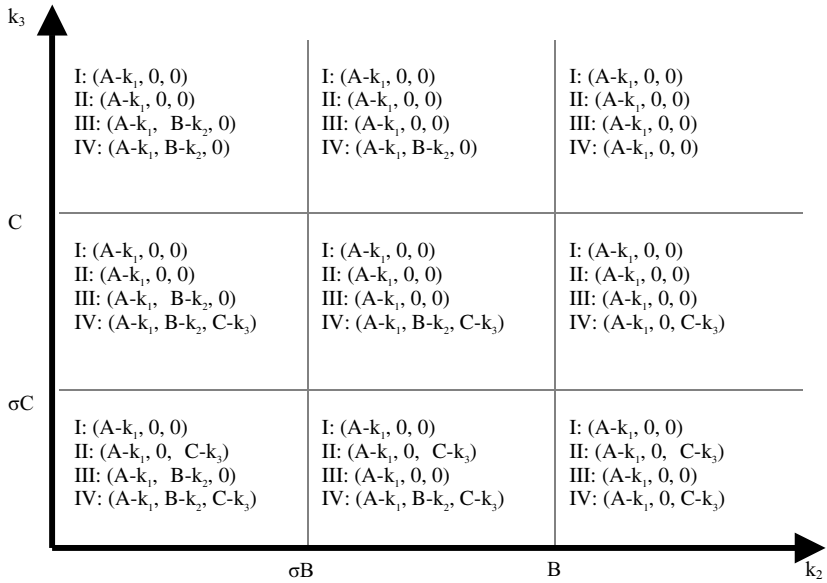


Fig. 11. Subgame perfect equilibrium payoffs when $k_1 \leq A$, $\sigma<1$

Franchisee Versus Company Ownership – An Empirical Analysis of Franchisor Profit

Thomas Ehrmann and Georg Spranger[1]

Abstract. In this paper, we examine ownership structures of franchise chains and evaluate their impact on franchisor profit. Specifically we compare pure forms of franchising with those that use both company-owned and franchised outlets within one chain – a phenomenon termed the plural form. Theoretically such plural arrangements are supposed to provide franchisors with lower costs, higher growth, greater total-quality, and reduced business risk.

Empirical results of this study indicate the superiority of company-owned businesses over franchised units in generating franchisor profits. Moreover plurally organized systems compensate for losses from franchising with profits from company units and outperform purely franchised competitors in overall profitability. Despite a clear financial inferiority of franchise outlets, franchisors of our sample do not convert plural structures into wholly-owned chains. Much more when organizing the chain, franchisors face an (skewed) inverse u-shaped profitablity curve with both pure franchising and pure company-ownership lying at the (undesirable) extremes and with a performance peak somewhere in between.

Keywords. Franchising, plural form, ownership redirection, company ownership, chains

1 Introduction

"As all of you know, the name of the game is not really franchising. The name of the game is company stores. ...It becomes obvious to you, if two hundred company-owned units out of 1600-1700 overall units produce 60 percent of the net after tax profit, the real name of the game is owning the stores yourself"[2]

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[2] Hooker (1970), 171.

Economic transactions within firms are organized either by hierarchy or by price mechanisms – or by a mixture of both. Concerning the matter of franchising, only a minority of today's leading franchise chains relies on pricing systems alone. The vast majority operates a minor but still significant number of company-owned stores (the hierarchy) side by side with their franchisees (the price system). Since Bradach and Eccles (1989) examined such special hybrid arrangements, mixes of company and franchise units within the same system, have been known as plural forms. In contrast to early research propositions by Oxenfeldt and Kelly (1968), Hunt (1973), Caves and Murphy (1976) and Martin (1988), plurally organized franchise chains have not significantly altered their structure into entirely franchised or company-owned systems. Thus plural forms appear to be a stable organizational phenomenon. Upon these findings, organization science began to explain the widespread use of plural forms by researching its advantages over pure franchise systems (Bradach 1997; Ehrmann and Spranger 2004). Compared to pure hierarchy (full vertical integration) or pure price systems (pure franchise chain), plural forms are firstly supposed to lower overall agency (i.e. monitoring) cost and the cost of searching for and implementing local and highly specific information.

Secondly, it is argued that plurality improves system and process quality by the following effects: By signaling internal franchisor information to the franchisee, thus overcoming inefficiencies arising from asymmetrical information; by preventing conflicts among contracting parties through aligning divergent interests of principals (franchisors) and potential agents (potential franchisees); by combining a franchisee's innovational power with the hierarchy of the company-owned distribution arm, leading to accelerated innovation and internal change; and, finally, by creating a competitive environment where benchmarking franchisees against managers of company-owned units increases overall system performance.

Thirdly, plural forms are supposed to facilitate chain growth. While the franchise part alleviates resource constraints – such as capital and managerial talent – the company-owned units provide a high degree of flexibility for quickly developing new local markets.

Lastly the plural form is understood as a tool of company-wide risk management that enables the principal to select franchising or ownership depending of specific local risk factors. In total, research has found that plural structures outperform pure forms of franchising and of company-ownership because of their positive effects on a chain's organizational costs, quality, growth and risk management (Ehrmann and Spranger 2004).

Following Oxenfeldt and Kelly (1968), we are not fully convinced that these aspects suffice to entirely explain the continued existence and stability of the plural form. Certainly, as Oxenfeldt and Kelly (1968, 69) state, "the arguments advanced by advocates of organizational science have force", but, just like Oxenfeldt and Kelly, we are not fully persuaded by them because in their aim to solve the plurality puzzle, they focus on single aspects rather than analyzing franchise chains as one profit producing entity. We therefore ask: Is it possible that the or-

ganizational structure impacts on a franchise chain's profit situation? If this is the case, which then is the structure that maximizes franchisor profit?

Generally, the franchisor's streams of income result from specific or residual claims towards his agents and differ depending on the chosen mode of distribution. Franchisees on the one hand pay an initial franchise fee upon joining the system, an ongoing royalty amount, and an advertising fee as a percentage of the outlet's sales volume. Thus the franchisor's claims towards franchisees are of a precisely specified nature. Company units on the other hand provide profit resulting from the positive difference between sales revenue and operating cost. Hence the franchisor's claims towards company-owned units is of residual nature. From the perspective of the franchisor – which will be ours for the remainder of this paper – chain profit is defined as the difference of all revenues (i.e. franchisees' fees and amount of company sales) and all costs (i.e. franchising overhead and company units specific costs). It is important to note that costs arising from operating the single franchise unit remain the franchisee's and are irrelevant for the franchisor's financials. From the principal's view, income streams of specific claims need to be challenged with those of residual claims in order to receive a meaningful statement regarding the profitability of distributional alternatives. Selected research work on ownership redirection has taken such an approach and implied explicitly (Hunt 1973) or implicitly (Oxenfeldt and Kelly 1968) a superiority in performance of company ownership over franchising.

In order to shed more light on these issues, we will explore whether and how organizational structures impact the franchisor's income streams. Specifically we contrast profitability of company-owned units with franchise units and ask whether and why plurally organized systems may be more efficient than purely franchised competitors. Our present approach is both theoretical and practical: In section two we will first use the findings of capital finance theory on the impact of financial structure on a firm's market valuation. In the perfect world of Modigliani and Miller both company and franchise units should be equally efficient and therefore neither income streams nor firm value are affected by organizational changes. Traditional finance theory though accepts that structure influences profitability and therefore plays an important role in maximizing a firm's valuation. These opposing views are challenged with the results of a recent IFA (International Franchise Association) study and with data received from franchisors' annual reports. We conclude in section four by discussing the implications of our findings for future franchising.

2 Corporate Finance for Governance Structures

Shaping the organizational setting of a chain means to choose between selling any new outlet to an independent franchisee or running it under company-ownership by hiring an experienced store manager. Hence structuring a franchise chain initially appears to be an issue of organizational choice only. Because each form is

characterized by a specific mode of revenue and costs, from the controller's perspective the choice of the organizational form results in decisive consequences for the franchisor's corporate finances and thus concerns more than just organizational efficiency. The main differences between any franchise and company-owned unit stem from divergent ownership patterns. Whereas the franchisor will have to bear the costs of investment in every company unit himself, franchise units will ideally be financed through the investment of the franchisee. Accordingly, residual ownership of the first remains with the chain, but of the second lies in the hands of the franchisee. In case of bankruptcy, the franchisor is liable for the company units, while claims against the franchise unit stay with the franchisee. While the franchisor receives residual profits from company-owned operations, franchisees in turn pay fees for entering the system, for using the common brand name and infrastructure and they contribute to advertising funds. With these specific attributes, the choice between organizational alternatives is as much an issue of corporate governance as it is of the franchisor's corporate finances. According to Williamson (1988), using different organizational modes for running a system is comparable to the choice of the appropriate mode of financing a firm or a project. The difference is to be found in a rather sharp dichotomy – financing the latter is done either by equity or by debt money.

Due to the characteristics of franchise and company-owned units, franchising means to finance the project (the new outlet) with money from outside (the investment is made by the franchise undertaking), while for company-ownership investment sources come from inside the system (the franchisor needs to invest himself). Accordingly, the franchisor's claims towards franchisees are specific (like a creditor's charges for debt) and those towards company-owned units are residual (like a creditors charges for equity). Thus when asking whether the choice of corporate governance influences the firm value, one could alternatively ask whether the capital structure of a firm, being a mix of equity and debt, does influence the value of the firm.

2.1 Modigliani/Miller for Franchising

In their classical work, Modigliani and Miller (1958) propose aim to explain the effects of a firm's capital structure on its market value. By grouping firms "into 'equivalent returns' classes, such that the return on the shares issued by any firm in any given class is proportional to (and hence perfectly correlated with) the return on the shares issued by any other firm in the same class"[3], they separate the risk of capital structure from the income risk, as now all firms in the same class have identical return patterns. They conclude that in an economist's ideal world of complete and perfect capital markets and with full and symmetric information among all market participants, the total market value of all the securities issued by

[3] Modigliani and Miller (1958), 266.

a firm is governed by the earning power and risk of its underlying real assets and is independent of how the mix of securities, issued to finance it, is divided between debt instruments and equity capital. Differences in market valuations of heterogeneously financed firms within the same class would then be eliminated through arbitrage by rational investors. Applying Modigliani/Miller's model of 'leveling-the-field' arbitrage dealing to the case of franchising, the irrelevance of financial (and thus organizational) structure on a chain's value becomes obvious.

With the investors' ability to add equivalent leverage by borrowing on personal account, levered (plurally organized) companies would ultimately be priced equally (i.e. no price premium would be charged) to unlevered (pure) competitors of the same return class.

As long as it is impossible to increase a chain's market value by exchanging company units for franchise units, or vice versa, both forms have to be considered equally efficient for the franchisor.[4] Alternatively, these results could be translated into a discounted cash flow model for calculating a firm's fair price. Accordingly the market value of a firm results from discounting future earnings with the interest rate measuring the weighted average costs of capital. The only ways of increasing the value of a firm, is by increasing its returns and/or decreasing the underlying interest rates. As long as altering a firm's leverage will not affect the discounting interest rate of chains within one class, firm value will be independent of financial and in particular, for our case also of corporate governance structure.

2.2 Traditional Capital Structure Theory for Franchising

Another approach towards the influence of capital structure on firm value is taken by supporters of traditional capital structure theory. They criticize the Modigliani/Miller assumptions as being unrealistic.[5] Indeed, assuming a perfect capital market does not comply with information asymmetries between actors, with incomplete information or with costs of bankruptcy and trading (e.g. equity into debt). Obviously for instance it is neither costless nor frictionless to exchange

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[4] To be consistent with the Modigliani/Miller proposal, we compared a fully integrated (fully company owned) with a plurally organized one. Of course the proof holds true also for the comparison of a wholly franchisee owned chain with a plurally organized one.

[5] These conditions are six fold: First Modigliani/Miller assume the existence of risk classes in which all firms share one identical pattern of income across changing states of the world. Second their model requires a frictionless perfect capital market, where asset trading actors are able to carry out arbitrage deals due to missing transaction costs and institutional restrictions. Third, taxes are neglected or perceived to be neutral, i.e. to be identical across taxpayers and for all income sources. Forth, investors are able to borrow or lend on the same terms as firms and fifth, there are no bankruptcy costs as in the state of failure all revenue is assumed to be given to the bondholders leaving them without serious financial damage. Finally firms are supposed to be unable of conveying information and thus influencing their market value by adjustment of their capital structure.

franchise units for company-owned ones. Moreover franchisees seem to anticipate different risk structures of franchise chains according to their organizational setup. As Ehrmann and Spranger (2004, 2005a) demonstrate for a sample of US-franchisors, plurally organized chains attracted larger investment volumes and charge lower royalty rates than pure franchise chains. The latter on the other hand realize significantly smaller investments from franchisees and charge them a lower franchise fee but a significantly higher royalty rate. Apparently franchisees demand fee-based risk compensation from those franchisors that relied too heavily on "debt" ("equity") just as bond (stock) holders do with low (high)-equity firms.

These results call for an analysis of the franchise organization process under the rules of traditional capital structure theory. In contrast to Modigliani/Miller, traditionalists propose a non-linear relationship between costs of debt and equity. Exchanging one form – organizational or financial – for another would then potentially minimize the costs of capital and thus maximize the firm's valuation. As long as a firm's total value is the sum of its total equity and debt, an all-equity financed firm may now lower its costs of capital and thereby increase its market value by substituting some equity for debt. As long as debt is the higher ranking collateral in case of bankruptcy, its risk of termination is then less than it is for equity. Consequently, for the franchisor, debt will be cheaper to accumulate than equity. While exchanging equity for debt, the franchisors are subsequently limiting their financial scope during recession. This exposes their creditors to an increasing risk of losing their claims in the aftermath of entrepreneurial downturns. Therefore beginning at some point α^* of leverage, creditors will start to compensate for such increased risks by adding a price premium on to their claim, which gradually equates the cost of debt and equity and makes additional degrees of leverage unfavorable. Correspondingly, leverage at α^* represents the minimum of the weighted average cost of capital and, everything else being equal, the maximum of the firm's valuation.

Applying this approach to the case of plural franchise chains suggest that mixing company and franchise units is more efficient than running a pure system. The fact that franchisors escort organizational changes with adjustments of their franchise fees and royalty rates, reveals that franchisees anticipate leverage risks just like every other creditor does. With the specific costs and benefits of each organizational form, the overall organizational efficiency is supposed to increase when leveraging closer to the ratio α^*. According to traditional capital structure theory, if leverage is too low, say the chain is wholly company-owned, the firm's value increases by issuing more debt (to emphasize franchising) in exchange for equity. If leverage is too high – to much franchising compared to company ownership – the firm's value increases by issuing equity (emphasizing company ownership) in exchange for debt (Bailey 2003). Here it would be the franchisor's task to identify the chain-specific value-maximizing mix of company ownership and franchising.

2.3 Explaining the 'Swollen Middle'

In order to relate the existence of plural franchise chains to a maximization of firm value, evidence needs to be presented that mixing organizational methods (hierarchy and the price system) results in similar non-linear cost/benefit-effects as mixing debt and equity in traditional capital structure theory. According to Hennart (1993), the costs of using the market or the hierarchy depend on each form's specific enforcement properties. When principals pay a fixed salary to the agent, they may impose behavior constraints in turn and hence exert control through hierarchy. Measuring an agent's production though, and rewarding him for the fulfillment of a predefined output, the principal imposes price constraints and thus exerts control through price mechanisms. Concerning the agent's reaction towards each form of constraint, each mode of control gives way to a distinct trade-off situation. Price constraints, on the one hand, maximize personal effort (minimizing shirking) but encourage cheating, either by offering unacceptable high prices or low quality. Behavior constraints on the other hand, work exactly the opposite way. They reward individuals for following directives and discourage them from cheating. In the absence of proper supervision though, they provide room for excessive shirking through the minimization of work effort. Consequently, the trade-off between price system and hierarchy is one involving low shirking and high cheating or high shirking and low cheating cost. Based on rationality, any given transaction should be exercised by a mix of price and hierarchy resulting in the lowest organizational costs.[6]

In case the relationship between the level of constraint and the specific amount of shirking and cheating costs is one of a linear nature, the choice of organizational form will tend towards one of the extremes. If it is easier, i.e. cheaper, to observe the agent's behavior than the outlet's output, behavior constraints are applied. If it is easier to control the output than the agent's behavior, price constraints prevail. So as long as organizing costs are linear, mixing behavior and price constraints into plural forms will never reduce the total organizing costs. Should, on the other hand, the sum of costs (benefits) increase (decrease) non-proportionally as the organization specializes into one method, substitution results in a hybrid form similar to the leverage α^* from above. At this point, the chain's organizational costs (benefits) are at their minimum (maximum) and thus firm value is at its maximum (Ouchi 1980). Depending on the specifics of cheating and shirking costs, the organizational mix is skewed more or less towards one of the extremes – resulting in hybrid forms that are dominated by behavior constraints or by price constraints.

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[6] Organizing costs are the sum of cheating and shirking costs in this case. As will be explained, there can be non-financial factors other than cheating and shirking costs that determine the degree of efficiency.

There is evidence that franchisors may find a non-linear relationship between the efficiency of franchising and company ownership. Empirically, the mix of franchise to company-owned outlets ranges from 2:1 (Pénard et al. 2002), to 3:1 (Lafontaine and Shaw 2005) all the way to 9:1 (Ehrmann and Spranger 2004). Bradach (1997) and Lewin-Solomons (1998) have argued such non-linearity exists because franchisors realize synergies when applying the plural form. Ehrmann and Spranger (2004, 2005a) have summarized those effects that may cause plural structures to be more efficient than pure forms: Plural forms may reduce agency and information cost, they may foster growth by overcoming limited resource accessibility without losing flexibility and keep entrepreneurial risk under control. Furthermore these plural forms improve system quality by signaling internal information, by harmonizing divergent interests, by balancing innovation streams and by advancing intra-firm competition.

Although franchising research has just started to explore the importance of these aspects, it should positively impact the plural franchise firm's profitability if any, some or all of these aspects apply. As a first step, our empirical analysis therefore needs to examine the income streams of both company-owned and franchise units more closely. H1 aims to compare the general productivity of both forms in terms of unit profit to the franchisor. In a second step, data is used to compare the overall profitability of plural chains with those of pure forms. As stated in H2, one mode (plural or pure) is supposed to outperform the other. What remains for testing in step three is the proposition of H3 that plurality (as it is supposed to apply to other hybrid forms) is a temporary phenomenon which will, sooner or later, dissolve into pure forms of market or hierarchy:

H1A: Company owned units are more profitable to the franchisor than franchise units.

H2A: Plural franchise chains are more profitable than purely franchised competitors.

H3A: Plural chains will evolve wholly-owned systems.

These hypotheses are contrasted by the following anti-theses:

H1B: Franchise units are more profitable to the franchisor than company units.

H2B: Pure franchise chains are more profitable than plural competitors.

H3B: Plural chains will evolve towards wholly-franchised systems.

3 Empirical Analysis of the Profitability of Plural Chains

3.1 Unit Profitability

The underlying supposition of those promoting ownership-redirection tendencies is – as explicitly stated in the introductory quote of John Hooker – that a franchisor extracts more profit from company-owned stores than from franchise units. Otherwise franchisors have little incentive to buy back successful franchises once their contracts have expired (as those supporting ownership redirection expect to happen). Franchising would then turn out to be a transitory phenomenon, serving the franchisor for a variety of reasons: the acquisition of capital (Caves and Murphy 1976; Mathewson and Winter 1985) or managerial talent (Thompson 1994), the compensation of extraordinary risks (Martin 1988) or the integration of entrepreneurial spirit (Bradach 1997). In order to clarify the profitability schemes of both organizational modes, we model the income and cost structures of company-owned and of franchise units.

Under the franchise contract, the franchisor will primarily receive an initial franchise fee plus ongoing royalty and advertising payments based on the franchisee's sales. Further he may charge the franchisee for training and business development, for leasing property and equipment and for purchased raw materials and supplies from the franchisor (Justis and Feltes 1986). For company-ownership, the franchisor receives revenue due to the outlet's sales of products or services.

Concerning a franchisor's cost, there are one-time as well as ongoing expenses. Examples of one-time costs are: developing new sites, investing in hard- and software, recruiting staff, etc. Ongoing costs are either variable, like those for input material and labor, or fixed, such as management salaries/benefits or rental and lease payments. Whereas franchisees will pay outlet specific costs, the franchisor bears all expenses accumulated by company-owned outlets. Thus the decision to franchise or to own is also a choice of two alternative income streams.

Table 1 below displays financials of seven large public US-restaurant retail chains for which suitable data were available through their annual 10-k fillings with the US Securities and Exchange Commission. In total, our sample contains ten of the best-known franchise chains in the restaurant business worldwide. With more than 76.500 franchise and company-owned outlets, they generate combined revenue of more than $28 billion.[7]

For each chain, we first calculated the difference of revenue and direct costs for each form (rows 6-7 and 10-11) and received the gross margin that each segment contributed to the gross profit. Secondly, we subtracted common cost (14 and 15) according to the form's share of outlets. Finally we divided both margin (8 and 12) and operating income (16 and 17) positions of both segments by the number of

[7] Furthermore they represent six of the 2002 top-ten Technomic100 chains. No data was available of the 2002's No. 2 (Burger King) and No. 4 (Subway) because of private ownership. The data of Starbucks (No. 9) and Domino's (No.10) lacked the necessary breakdown of revenue and costs. See www.technomic.com.

Table 1. Unit Profitability of Seven Large Franchisors

Chain	McDonald's	Carl's Jr	Hardee's	Denny's	Wendy's	Apple-bee's	YUM[1]
1. Year of annual report	2002	2003	2003	2002	2002	2002	2002
2. Company-owned units (CU)	9.000	440	730	547	1.320	357	7.523
3. Franchised & licensed units (FU)	22.108	547	1.499	1.010	4.933	1139	25.397
4. Franchising in %	71,07%	55,42%	67,25%	64,87%	78,89%	76,14%	77,15%
5. Total system-wide revenue[2]	$15.406	$694	$628	$949	$1.979	$827	$7.757
6. CU sales	$11.500	$508	$562	$859	$1.700	$725	$6.891
7. Cost of CU sales	$9.907	$397	$500	$738	$1.380	$614	$5.790
8. CU margins	$1.593	$110	$62	$120	$320	$111	$1.101
9. Margin per single CU	$0.177	$0.250	$0.085	$0.220	$0.242	$0.311	$0.146
10. FU revenue	$3.906	$186	$66	$90	$279	$102	$866
11. Cost of FU revenue	$840	$163	$33	$29	--	--	$49
12. FU margins	$3.066	$23	$33	$61	$279	$102	$817
13. Margin per FU	$0.139	$0.042	$0.022	$0.061	$0.057	$0.089	$0.032
14. General & admin. Expenses	$1.713	$43	$47	$50	$175	$81	$913
15. Other operating (inc.) expenses	$833	$34	$38	$82	$86	$2	($30)
16. Operating income CU[3]	$857	$76	$35	$74	$265	$91	$899
17. Operating income FU[3]	$1.256	-$20	-$24	-$24	$73	$39	$136
18. Total operating income	$2.113	$56	$11	$50	$338	$130	$1.035
19. Operating income per CU	$0,095	$0,173	$0,047	$0,135	$0,201	$0,255	$0,120
20. Operating income per FU	$0,057	-$0,036	-$0,016	-$0,024	$0,015	$0,034	$0,005
21. Margin ratio CU: FU	1,28	6,03	3,86	3,62	4,28	3,47	4,55
22. Operating income ratio CU: FU	1,68	-4,78	-2,98	-5,61	13,52	7,50	22,36

[1] YUM operates KFC, Pizza Hut, Taco Bell, A&W and Long John Silver's. Figures are for the entire company.

[2] dollars in millions

[3] (14) and (15) are deducted proportionally to (4).

company-owned and franchised outlets to receive the contribution that each single outlet made to the company's overall gross margin (9 and 13) and to the operating income (19 and 20).

The results in rows 21 and 22 exhibit both the gross margin ratios as well as the operating income ratios for company-owned to franchised units. For each chain analyzed, the single company-unit added far more to both the gross margin and to the total operating income than the single franchise unit. The operating income ratio of Carl's Jr., Hardee's and Denny's are negative. Hence franchisors of our sample profited from self-run units but lost part of it again due to franchise operations. Three limitations apply to the analysis in table 1:

First, our sample does not claim to represent the entire spectrum of all quick service restaurants, as for instance size and business experience of our sample chains are greater than the industry average.[8] Nevertheless by analyzing just eleven out of the 100 largest restaurant brands, we covered 36% of all revenue and 33% of all outlets of this population.[9]

Second, we are fully aware of the difficulty associated with breaking-down general and other operating expenses (14 and 15 in table 1), although all other computable specific costs, per definition, have been already deducted in rows 7 and 11. We therefore included gross margins and the gross margin ratio and find the latter also supporting the thesis of company-ownership superiority.

Finally we have ignored the fact so far that company units are financed by the franchisor, which deserves substantial amounts of franchisor capital. Franchise units in turn are financed by franchisees and do not dilute the franchisor's capital resources. Return-on-investment-figures, which fill this gap, cannot be derived from the data because chains do not report detailed-enough asset information. To overcome this weakness, we estimate the cost of capital for company-owned operations in table 2 below.

Evidently, even if costs of capital are included in the model, the superiority of company operations over franchising remains valid for any chain but McDonald's (see table 2). To be perfectly accurate, financing rates would have to be raised by surcharges to the general market rates according to each company's individual credit rating. As surcharges of usually 50 to 120 basis points (according to the credit rating category) do not change the results of table 2, such speculative calculations have been omitted for the purposes of this analysis.

Summarizing the findings on unit profitability we conclude: Operating company-owned units is more profitable in terms of maximizing the franchisor profit than engaging in franchise activities. Within the limits of our sample, we therefore accept H1A (and reject H1B) and will examine the profitability patterns of more heterogeneously organized and smaller firms more closely in the next section.

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[8] Compare the industry average of size, age and degree of franchising as displayed in studies by Lafontaine and Shaw (2005), Pénard et al. (2002) and Ehrmann and Spranger (2004, 2005a).

[9] See www.technomic.com figures of 2002.

Table 2. Capital Cost of Company Operations

Chain	McDonald's	Carl's Jr	Hardee's	Denny's	Wendy's	Applebee	YUM[1]
23. Average investment per CU[1 2]	$ 1,050	$ 0,991	$ 0,935	$ 1,385	$ 1,222	$2,455	$0,970
24. S&P credit rating[3]	A-1	B-	B-	CCC+	A-2	---	BB+
25. Long-term interest rate (10 yrs $TSR)[4]	4,61%	4,01%	4,01%	4,61%	4,61%	4,61%	4,61%
26. Cost of capital per CU[2]	$0,048	$0,040	$0,037	$0,064	$0,056	$0,113	$0,045
27. Adj. margin per CU	$0,129	$0,211	$0,048	$0,156	$0,186	$0,198	$0,102
28. Adj. income per CU	$0,047	$0,133	$0,010	$0,071	$0,144	$0,142	$0,075
29. Adj. margin ratio CU: FU	0,93	5,07	2,17	2,57	3,29	2,21	3,16
30. Adj. operating income ratio	0,82	-3,68	-0,62	-2,96	9,73	4,18	13,99

[1] Source: Entrepreneur Magazine 2002
[2] Dollars in millions
[3] www.standardandpoors.com
[4] www.federalreserve.gov, 2002: 4.61%, 2003 4.01%.

3.2 Chain Profitability

In order to identify and measure the key profit drivers in franchising, the IFA surveyed financial data of 65 member chains and published these findings in the 2001 Financial Benchmarking Study. Since survey participants volunteered for the study and were not selected according to statistical sampling methods, the data collected may not be a representative cross-section of all IFA member chains. Despite this limitation, the analysis contains valuable insights into the profitability patterns of franchisors, consisting both of plurally organized and of purely franchised chains. Table 3 displays the descriptive statistics of the sample chains.

In total, the IFA sample covers a substantial part of the very broad spectrum of franchise systems. Only a minority of the chains is relatively young (15% < 10 years in business, 34% < 10 years of franchise experience) and small (24% < $2m in franchising revenue, 32% < 100 franchise units). Furthermore, different industries are well represented by the sample. Only the ratio of plural to purely franchised systems does not fully correspond to the figures of much larger samples (see the studies listed in part 2.3 above). Still with 23 chains being plurally structured (46% franchising on average) and 42 systems being fully franchised, the two groups are sufficiently different concerning their organizational structure.

Franchisor profitability is calculated in a way similar to the approach taken in the previous section. As a first step, the participants calculated gross profit of all franchise operations as the residual of revenue (including franchisees' fees and royalties[10]) and costs of goods sold. After deducting employee and general/administrative expenses for operating the franchise activities, the franchising profit is received. Then the participating franchisors were asked to determine the profit from company-owned operations separately from that of franchising. Finally the sum of both profit streams, less the amount of other income, determines the extent of profit before tax. Note that in table 4 analysis, the IFA choose to express the profit before tax figure as percentage on the chain's franchise revenues only – and not on all revenue of franchise and company-owned operations.

Table 3. Descriptive Statistics 2001 IFA Study

Characteristics						
	< 10 years	10 to 19 yrs	20 to 29 yrs	>30 yrs		Total
Age of Company	15%	29%	30%	26%		100%
Years of Franchising	34%	36%	15%	15%		100%
Total Franchise Revenue	< $2 Mil.	$2 to $5 Mil.	$5 to $20 Mil.	> $20 Mil.		
	24%	28%	31%	17%		100%
Number of FU	< 100 FU*	100 to 200 FU	200 to 300 FU	> 300 FU		
	32%	24%	23%	21%		100%
Franchise Type	Maintenance	Food	Business Serv.	Personal Serv.	Retail	
	22%	23%	20%	22%	13%	100%
Organizational Structure	5% or more Company-owned		95% or more Franchise focused			
	23		42			65
		35%		65%		100%
Median Number of CU*		130		0		
Median Number of FU		112		215		
Degree of Franchising λ*		46%		100%		

* CU = Company Units, FU = Franchise Units, λ = FU/(CU+FU)

[10] International Franchise Association (2003): p. 25.

For gaining insights into each channels economics, we separated the sample of 65 chains into those chains with 5% or more of company units out of all outlets and those with less than 5% when calculating the profitability ratios. Consequently we were able to use the same calculation scheme as for tables 1 and 2. Hence the sum of profit from franchising and company ownership is adjusted by other income/expenses[11] weighted with the proportions of company-ownership and of franchising. Again we allocated each outlet's contribution, here, to the franchise revenue and not to the overall revenue.[12]

As clearly revealed in table 4, plurally organized chains display a distinctly different income pattern from that of pure franchisors. In terms of franchise revenue, franchisors with 5% or more of company ownership earned almost as much profit from their owned locations as they received in total franchise revenue. These figures are contrasted by losses that plurally organized chains encounter through their franchising business. Pure franchise chains on the other hand operate their franchising activities with profit. Contrasting the total profit before taxes of both organizational alternatives though, purely franchised chains achieve just one-third of the profit before taxes in proportion to the franchising revenue that was achieved by the group of plurally structured systems. Thus the central result of this analysis is that plural franchise chains of this sample realize negative profits from their franchise activities, but offset these losses with highly profitable company-owned outlets. Overall, plural arrangements from this IFA survey are more beneficial for maximizing the franchisor's profit than purely franchised competitors.

Regarding the data's consistency, proper allocation of revenues and cost to each organizational type may pose an accountancy problem to franchisors. Plural chains, for instance, will most likely incur higher expenses due to operating locations by themselves. The large difference in general/administrative and employee expenses of both sample groups might indicate that costs of company operations had not been allocated correctly and thus were wrongly deducted from the franchising revenue. Even though the IFA advised all participants to separate the cost of each form, some doubt about the reliability of the data remains. Additionally the IFA purposely[13] refrained from analyzing the efficiencies of company operations, but requested members to summarize a complex income stream within one single profit figure which in turn is then related to franchise revenue.

Within these limitations though, the data supports hypothesis H2A (rejecting H2B). Accordingly plurally organized chains of the sample incur losses from franchising but compensate for these by being highly profitable in their company

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[11] According to the shares of company-ownership and franchising displayed in table 3.

[12] International Franchise Association (2003): p. 25f.: Franchise Revenue for the "5% or more CU"-Group ("95% or more FU"-Group) in this sample is made up by the following components: Royalties: 59.4% (62.9%), Initial Franchise Fees: 11.4% (18.4%), Other Franchise Fees: 0.8% (2.1%), Product or Service Sales to Franchisees: 16.8% (10.7%) and Other Revenue: 11.6% (5.6%).

[13] International Franchise Association (2003), 24.

Table 4. Profitability Breakdown Chart[14]

	All 65 Companies			All 65 Companies Adjusted*			
	5% or more CU	95% or more FU		5% or more CU		95% or more FU	
			CU	130		0	
			FU	112		215	
Franchise Revenues	100%	100%		100%		100%	
- Cost of Goods Sold	14.5	10	-	14.5		10	
= Gross Profit	85.5	90.0	=	85.5		90	
- Employee Expenses	56.2	34.9	-	56.2		34.9	
- General & Administ. Exp.	68.5	39.6	-	68.5		39.6	
= Profit from Franchising	- 39.1	15.5	=	-39.1		15.5	
+ Profit from CU**	91.0	.6		91.0		.6	
+/- Other Income/ Expenses	-14.1	-2.9		-6.6	-7.5	0	-2.9
Profit Before Taxes**	37.8%	13.2%		84.4%	-46.6%	0.6%	12.6%
			Sum	37.8%		13.2%	

* weighted with degree of organization λ **as percentage of franchise revenues

operations. Purely franchised systems on the other hand are profitable with their franchise business, but finish overall with just about one third of the profitability of plurally organized competitors. Although profits of both modes are not comparable on an absolute basis (due to relating company-owned profit to franchise revenues), these findings support the non-linearity of organization costs as acknowledged by Hennart (1993) and presented in part 2.3 above.

3.3 Chain Development

What remain to be tested in a third step are the potential effects that the results of H1 and H2 may have on the evolution of franchise organizations. According to evidence from above, plural franchise chains outperform purely franchise-based competitors in unit profitability. Much more, plural systems profit from their company operations while they suffer losses from their franchise activities at the same time. Under a strategy of profit maximization, a rational franchisor running a mature system should ultimately turn franchises into company-operated outlets, coming up with a wholly-owned chain. Such a process of ownership redirection

[14] Ibid: p. 24.

has first been described by Oxenfeldt and Kelly (1969) and reformulated by Dant, Paswan and Kaufmann (1996, 429) as follows: "Do franchisors use franchisees to open markets, develop consumer acceptance and preference for the franchisors' trademarks and then appropriate that brand equity by terminating or otherwise ending the franchisees' rights to continue to operate the business?"[15]

We test this thesis along a sample of the highest-ranking chains of the *Franchise500* report (table 5 below), which is annually published by the Entrepreneur Magazine. As the mean firm size decreases rapidly with lower rankings, concentrating on the first 300 systems hedges to some extent against fatal downward distortions.[16] To measure structural changes once franchise agreements expire, a second test includes firms with more than 10 years of franchise experience (which is the mean term of franchise contracts for the sample) both for 2001 and 2004. Since the data is not distributed normally, we use non-parametric tests for measuring potential correlations between age (FRANAGE) and structure (LAMD).

Table 5. Non-parametric Correlations of the Franchise300

		FRANAGE01* / LAMD01**		FRANAGE03 / LAMD03	
		ALL	>10 yrs	ALL	> 10 yrs
Kendall's tau_b	Correlation Coefficient	-0,38	0,20	-0,59	-0,009
	Sig. (1-tailed)	0,179	0,337	0,082	0,423
	N	300	222	284	235
Spearman's rho	Correlation Coefficient	-0,54	0,27	-0,80	-0,011
	Sig. (1-tailed)	0,174	0,347	0,089	0,432
	N	300	222	284	235
Descriptive Statistics	N (ALL / > 10 yrs)	300 / 222	300 / 222	284 / 235	284 / 235
	Mean (ALL / >10 yrs)	19,38 / 23,61	90,56 / 90,53	21,38 / 24,02	92,21 / 92,51
	Std. Dev. (ALL / > 10 yrs)	12,43 / 11,78	17,30 / 16,20	12,43 / 11,97	15,88 / 14,15

* Franchise experience in years. ** Degree of franchising λ = FU/(FU+CU)

[15] The central word of this quote is "appropriate". Thus the authors presume that there is some value to be gained by integrating formerly franchisee owned units. This supports our results from above that company-owned units generally provide a higher return on investment to the franchisor than franchised outlets do.

[16] The strongly decreasing means of outlets were for the 1st quantile (1-100): 2981, the 2nd quantile (101-200): 267 and for the 3rd quantile (201-300): 171.

Three out of four tests revealed a slightly inverse relation between the firm's experience (FRANAGE) and the degree of franchising (LAMD), though strength decreased for the older-than-10-year fractions. Neither analysis however found the results to be significant on a confidence level of 5% or less. The sample therefore does not allow asserting the existence of a trend of converting franchisees into company-owned units.

Other studies of Lafontaine and Kaufmann (1994), Lafontaine and Shaw (1999) and Pénard et al. (2002) using much larger samples, were also not able to find empirical evidence for ownership redirection tendencies. Only recently, Dant and Kaufmann (2003, 63) presented data on 152 US-chains claiming "although franchisors value the benefits of the mix of ownership types and do maintain that mix over time, there is some evidence of a greater tendency to permanently convert existing franchised outlets to company-owned outlets as fast food systems mature and gain greater access to resources". We fully agree with the authors that 'tendency' sounds plausible for reasons of profit maximization to franchisors with a strong emphasis on franchising activities. But – and that is the issue of ownership redirection – there is no empirical evidence that franchisors are permanently and fully converting their franchisees to company-owned units. As of the data presented, there is no significant relation between the degree of franchising and the length of franchise experience. Both H3A and H3B are therefore rejected. Despite a superiority of company over franchise operations concerning franchisor profit there is no indication for moving organizational structure into either one of the extremes. Chains are rather keeping it stable in the "swollen middle" of plural forms.

4 Conclusions and Discussion

Researchers of organization science remain puzzled by the heterogeneity in organizational structuring that they encounter when looking at matured franchise chains. Plural forms have long been viewed as unstable and transitory phenomena, being finally dissolved in either one extreme of market (franchising) or hierarchy (company ownership). We have attempted to investigate whether and why such a moving to the extremes does not take place in reality. We applied an analogy of corporate governance and capital structure theory, stating that in a world other than the ideal of the Modigliani/Miller model, structure impacts the valuation of a firm or a project. Applying the logic of Hennart, we then hypothesized that exchanging franchising for company-owned operations (or vice versa) resolves in a non-linear relationship of net benefits – perhaps for the reason of cost reduction or revenue increase or a combination of both. Within the limits of the gathered data, we have further demonstrated that major franchise chains extract a higher operating income and return on investment per unit out of their company-owned operations compared to their franchised ones. To our surprise, some chains suffered losses per unit from their franchise activities. The analysis of the IFA data supported these findings by demonstrating that plural chains realized negative profits from franchise activities, but offset these losses with highly profitable company-owned outlets.

Compared with the income of pure franchise chains, the plural arrangement proved to be almost three times as profitable – although the fair integration of capital costs did slightly alter, but not change this result. With this in mind – company operations are more beneficial for maximizing a franchisor's profit and plurally organized chains outperform purely structured competitors – we finally tested the thesis of ownership redirection on a sample of 300 franchise chains, but found no significant supportive results.

There are several conclusions to be drawn from these findings: First of all, in regard to the capital structuring analogy and in contrast to what Modigliani and Miller suggest, in the world of franchising, chain structure matters. As franchisors replace franchise units with company-owned ones, they improve their firm's profit situation. Second, this increase in benefit – financially and non-financially – seems to follow an inverse u-shape distribution, as otherwise evidence of ownership redirection would be significant.[17] Thus the ultimate substitution of franchise business appears to be detrimental to the chain. More generally, this point is brought up by Bradach (1997, 298) formulating that "each structure has strengths and weaknesses, and if an organization can use each to leverage the strengths and ameliorate the weaknesses of the other, then overall organization will be stronger than if either structure operates alone". As we have shown in this paper, generating franchisor profit seems to be a major strength of company operations and not one of franchising. By plurally organizing a formerly purely franchised system, a franchisor increases chain profit. While doing this, he gradually reduces the franchisee's influence and simultaneously gives up on multiple strengths of the franchising arm (e.g. franchising being an important source of acquiring resources like managerial talent and capital, cultivating entrepreneurial spirit and enhancing intra-firm innovation) – a move that we hypothesize to result in a net loss for the franchisor from some point on. This being the case we further conclude that there should exist some ratio λ^* just like a^* in capital structuring theory, at which the franchisor will have optimized the combination of strengths and weaknesses of both forms.

So how about John Hooker's 'name of the game'? As we have explained, he is right in so far as company units are important sources for franchisor profit. Pure franchise chains, disregarding this function, operate knowingly below their potential profit maximum and could win by emphasizing company operations. As in finance theory the optimal a^* depends on firm specific characteristics, λ^* will be individual for each chain and can hardly be determined from outside. Franchisors will first have to identify the strengths and weaknesses of both forms in regard to their firm specific characteristics.[18] Then they will need to balance them realistically against each other in accordance to their firm specific business strategy.

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[17] Note that the studies named in section 2.3 suggest such a mountain to be skewed towards the franchising part of the curve.

[18] See Ehrmann and Spranger (2005b) for a more detailed view on characteristics that may even call for a wholly company-owned or a purely franchised structure. In short, the choice of organizational form is influenced by the individual total of net hybrid form benefits and net plural form synergies of each system.

Although we lack the proof that too much company-ownership causes detrimental effects to profitability, empirical evidence suggests that successful franchise systems rather remain plurally organized than becoming wholly-owned chains. Thus Hooker is wrong when postulating full ownership to be the desirable option for today's franchisors. As we have demonstrated, the name of the game is neither owning the stores yourself nor going the franchising-only route. There is much more evidence that the name of the game is the plural form.

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Existence of the Plural Form Within Franchised Networks: Some Early Results from the US and French Markets

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Abstract. The plural form has been the subject of a considerable body of research since Bradach developed his model (1998). Most of this work was done in North American, Australian, or European countries. The purpose was mainly to assess the degree of plural form within franchised networks using economic, environmental, organizational, or marketing variables. In the present paper, the focus is not on plural form in only one particular market but instead on a comparison of the extent of the plural form within US and French networks. The main finding is that the rate of company-owned units is significantly higher in France (36.09%) than in the United States (9.45%). This can be explained through the differences in the territory area, and also managerial and strategic differences in the way retail and service networks are run in the two countries. Differences in the extent of plural form are also explored according to the retailing or services orientation of the networks. Finally, some determinants of the extent of plural form are highlighted.

Keywords. Franchising, plural form, multi-countries analysis, France, USA

1 Introduction

In franchising research, plural form is a recent concept, first announced by Bradach and Eccles (1989), then highlighted in several research papers (e.g. Lafontaine and Kaufmann 1994; Lafontaine and Shaw 1999a). 'Plural form' simply refers to the coexistence of franchised units and company-owned units within a same chain. The concept of plural form was clearly defined by the Bradach model (1998). The model is actually based on meeting four challenges related to: 1) spatial expan-

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sion, 2) concept uniformity maintenance 3) reaction against competition, and 4) service and/or retail concept evolution.

Many researchers have tried to focus on various aspects and/or applications of the concept of plural form and of this model. It was first defined to accompany exploratory research into US restaurants (Bradach 1997). Other papers have enhanced the advantages and drawbacks of plural form networks in the hotel industry, the bakery sector or retail cosmetics in France (Cliquet 2000), or have compared plural forms or tapered integration (Bradach and Eccles 1989) with other theoretical approaches, such as signalling theory and resource-based theory (Dant and Kaufmann 2003), property right and transaction cost theories (Windsperger 2004a; 2004b), or the theory of incentives and the agency theory (Chaudey and Fadario 2004). Some have focused on particular elements of the model, such as innovation (Lewin-Solomons 1999; Cliquet and Nguyen 2004), the organizational learning process (Sorensen and Sørensen 2001), or the royalty rate (Pénard, Raynaud, and Saussier 2003). Ehrmann and Spranger (2004) examined cost reduction, quality enhancement, growth stimulation, and optimized risk control.

Though this research was developed in a variety of countries (Australia, Austria, France, Germany, Spain, and mainly in the United States), as far as it is known there has been no attempt to compare the situation across countries. The contribution of the present paper, as far as the theoretical perspective is concerned, deals with the fact that it is only through such cross-cultural empirical investigation that a genuine sense of the generalizability of the theories and their boundary conditions can be found. As far as the managerial implications are concerned, franchisors must adapt to local cultural imperatives and business practices if they are to succeed cross-culturally. Such comparative analyses alert the managers to the cross-cultural idiosyncrasies.

This paper aims to compare the degree of plural form, or plurality, as measured by the rate of company-owned units in franchise networks, between the United States and France. The first purpose of the empirical research developed in the second part of this paper, is therefore to compare the implementation of plural form within the US and French retail and service networks. Do the US and French franchisors tend to mix franchising and company arrangement in a similar manner? If not, which kinds of network and/or market features could help to explain these differences? The second purpose of this paper is an attempt to underline the main trends in the existence of plural form. Are there, for example, any significant differences between retail and service networks? In this paper, some explanatory variables of the plural form will be identified. Recent data concerning nearly one thousand US and French networks are used in the empirical analysis.

The paper is organized as follows. In the next section, the main approaches used to explore the plural form within franchised networks are presented. Then, in section 3, the research design, and more specifically data, variables and methodology, are detailed. Section 4 depicts the main results of the comparative analysis of the US and French networks. Finally, the results are discussed in section 5.

2 Literature Review

The plural form concept has been studied in detail for about a decade, albeit often in an exploratory manner. Four important models can be identified:

- econometric models, drawn from economic research,
- channel management models, from accounting data,
- models of rupture in the franchise process,
- models founded on spatial considerations drawn from management sciences, or management and marketing, or even geography.

The first models rely on regression analyses and econometric techniques using databases. These are purely statistical studies which aim to test hypotheses established from theories such as agency theory (Shane 1998a), or founded on the study of certain concepts such as the importance of the brand name (Lafontaine and Shaw 2005), or the elements of the marketing mix such as price (Lafontaine 1998) or advertising (Michael 1999). The dependant variable is usually the proportion of company-owned units or PCO. They are the global models of store network study. The second category of models was initiated by Kaufmann, Gordon and Owers (2000) and relies on the notions of accounting and economic value. The third manner of modeling the plurality of forms uses the study of ruptures in the franchise process (Frazer 2001). The recent nature of these two latter categories does not allow in-depth development as only one model has been developed in each. Finally, the fourth kind of model examines particular aspects of the management of store networks: innovation (Sorenson and Sørenson 2001) and location (Ghosh and Craig 1991).

This section is split into two parts: the first describes the econometric models and the second deals with the three other kinds of models.

2.1 Econometric Models

Most of the econometric studies linked to the plural form so far have been carried out in the United States. Many have led to non-significant connections. This is the case in works based on networks belonging to ten sectors of activity over ten years, which show that only franchisee sales by establishment explain the percentage of company-owned units (Wade, O'Hara and Musgrave 1990). This tends to indicate that it would be of interest to the franchisor to internalize and therefore increase the percentage of company-owned units because his/her return rate would be lower than that of his/her franchisees. This might explain the behavior of certain franchisors who own the large establishments and leave the smaller ones to the franchisees. Research papers on the level of salaries tend to confirm this tendency insofar as the salaries of employees in company-owned units are higher and increase more rapidly than their counterparts in franchises (Krueger 1991). More

recent studies have shown that the proportion of franchises in the retail trade is positively related to size and geographic expansion and negatively associated with the rate of growth and the level of investment (Alon 2001).

In fact, modeling studies connected to the relative proportion of franchisee activity compared to that of company-owned started in the mid-1980s. At this time, based on a rather simplistic first model (O'Hara and Thomas 1986), Thomas, O'Hara and Musgrave (1990) developed a model with a dependent variable as a ratio between franchisor sales by unit and the total sales by unit of the franchise. The explanatory variables are the degree of vertical integration, measuring the relationship between the number of company-owned units and the total number of units, the rate of conversion, or the relationship between moving into franchise and the total number of ownership changes, the rate of re-purchase, or the relationship between the number of units re-purchases by the operator and the total number of ownership changes. There is also a dummy variable measuring the difference of investment, equal to 1 if the median investment of the franchised units is higher than that of the company-owned units, equal to 0 if not. The main result of the model, developed for 10 sectors of activity over 10 years, is that, when there are too many company-owned units, losses are incurred. This invalidates the ownership redirection argument according to which one repurchases the franchises in the maturity stage (Oxenfeldt and Kelly 1968-69). The authors also tested a vertical integration model with a dependent variable measured by the degree of vertical integration, measuring the relationship between the number of company-owned units and the total number of units. The explanatory variables are: intra-system sales by franchised units (total of franchisor sales to franchisees divided by the number of franchised units), sales by franchised units, and the same dummy variable as above. Only the franchised unit sales are significant and positive concerning the degree of vertical integration. This means the success of franchisees encourages operators to own units, hence the development of plural form networks.

However, in the end, these models are less than explanatory in a more managerial arena. It is therefore necessary to examine other models. Three categories of models will be studied in more detail. The first also deals with the proportion of franchises/company-owned units, but with more variables. The second concerns the agency theory and the third examines the connection between certain elements of the marketing mix.

Brown (1998), Lafontaine (1992) and Lafontaine and Shaw (1999a; 2005) have published econometric work concerning the plurality of store networks. The first article is based on transaction cost theory. The last two deal with the impact of different environmental and organizational variables on the proportion of franchises/company-owned units within plural form networks. Using multisector data, Lafontaine (1992) showed that the proportion of franchises rises with the geographic dispersion, the rate of growth and the age of the network. She also explores, in the same article, the determinants of the rate of re-purchase in the franchise contracts. She noticed that the econometric estimations explain the proportion of franchised units better than the terms of the franchise con-

tracts. However, this proportion decreases with the average sales and the capital invested per store.

Using transaction cost theory, Brown (1998) showed that the firm tends toward a long-term equilibrium between the proportions of franchised units and company-owned units. In fact, it uses a more efficient system of internal promotion in order to motivate employees and leaves it up to the franchisees to motivate their employees, who would be inevitably disadvantaged with contracts founded on performance. These kinds of contracts would imply high monitoring costs for the operator.

Lafontaine and Shaw (2005) used a sample of more than 4,800 North American store networks from 1980 to 1997. For each network, it was possible to know the creation date, its number of years of franchising experience and its domain of activity. Furthermore, for each year, the authors knew the number of company-owned units versus the number of franchises, the rate of repurchasing and the up-front fees. Using these data, it is noticed that after eight years of franchise experience, the networks keep a stable level of PCO: after declining in the first few years, the PCO is on average between 10 and 20%. This stability is found regardless of the sector, the network size or the rate of growth. However, large differences exist from one firm to another or from one sector to another in respect to the target of managerial control. The target PCO in the restaurant industry is around 20%, which is far higher than that of construction and maintenance services (5%) or for car repair (10%). Moreover, networks offering services have a higher proportion of franchises than retail networks. Lafontaine and Shaw (2005) also show that the PCO increases with the worth or quality of the brand name.

Studies by Spanish researchers are currently underway in order to shed light on the existing relationships between the rate of franchised units, network size, brand recognition and sector popularity (López and Gonzàlez-Busto 2001). It emerges from this research that, when faced with the simultaneous development of brand recognition and sector popularity, the number of franchisees increases, albeit to the detriment of the PCO. This imbalance tends to undermine concept control and therefore risks affecting the image of the brand. This had already been pointed out in a previous exploratory study (Cliquet 2000). The necessity of counterbalancing this disproportion of franchised units makes necesssary the opening of new company-owned units, which in turn increases the degree of integration, in order to preserve the uniformity of the network (Bradach 1998). Furthermore, a virtuous cycle is created between the degree of integration of the network, the brand recognition, network sales, franchisor profits and the number of company-owned units (López and Gonzàlez-Busto 2001). The opening of company-owned units has a positive effect on brand recognition and concept uniformity, which in turn affects sales. These relationships are studied using data from 5,000 American and Canadian networks, established from 1980 to 1997, taken from the works of Lafontaine and Shaw (1999b) and compared with data collected in Spain. This research attempts to model the rate of company-owned units (or franchised units) while taking the first two of Bradach's (1998) challenges, adding new units and maintaining uniformity across units, into account. The pattern studied can be summarized as follows:

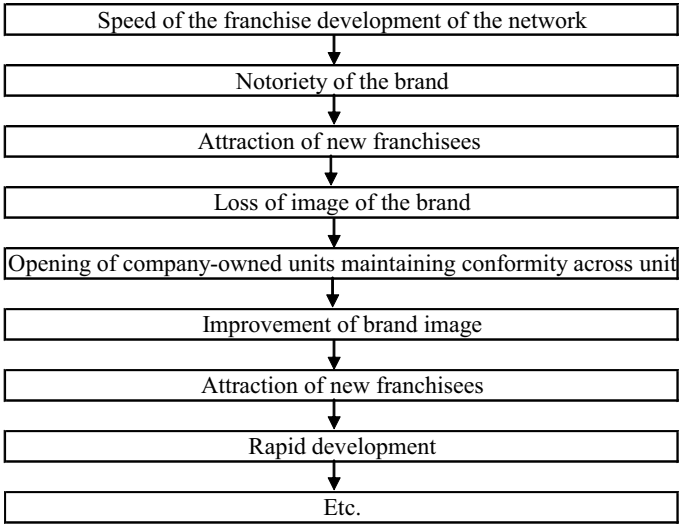

Speed of the franchise development of the network
Notoriety of the brand
Attraction of new franchisees
Loss of image of the brand
Opening of company-owned units maintaining conformity across unit
Improvement of brand image
Attraction of new franchisees
Rapid development
Etc.

Fig. 1. Plural form construction model from López and Gonzàlez-Busto (2001)

This reasoning applies to developing networks. The introduction of the two other challenges, local responsiveness and system-wide adaptation, would require more mature networks to take at least two other supplementary concepts into account: the incentives that a franchise system can provide, concerning responsiveness, and a true brand management for the adaptation. Actually, the responsiveness can also concern the development phase (as well as the maturity phase), and only the challenge associated with system-wide adaptation more closely concerns the mature networks. While incentives favor the maintaining of a rather high rate of franchised units, the restrictions of an acceptable growth of return require the operator to develop company-owned units, either by opening new stores or repurchasing franchised ones. The necessity of a brand management imposes the plurality of status for, while the company-owned units favor uniformity, the franchises allow for better local responsiveness and often allow a company to take advantage of numerous and simultaneous opportunities. The thinking developed from the works of López and Gonzàlez-Busto (2001) also leads up to the idea of a stabilization of the PCO.

Controlling the effects due to sector, size and age, Shane (1998a) proved that young franchise networks are more likely to survive if they are structured to save on agency costs. Through interest in plural form networks, Shane (1998b) used an analysis of multiple regression on a database of American franchisors from 1991 to 1994 to show that the characteristics of the franchisors have curvilinear effects on the distribution of franchised and company-owned units within the plural form networks, while the agency theory hitherto confirms that these effects are linear (Lafontaine 1991; Lafontaine and Kaufmann 1994). These characteristics involve geographic dispersion, royalty rates, network growth rate, network size, entry fees

and initial investment amount. These characteristics represent the explanatory variables of the model using the proportion of franchised units (1 – PCO)) as a dependent variable.

Recent studies have concentrated more closely on certain elements of the marketing mix of store networks such as price or advertising. Lafontaine (1998) studied price dispersion in the fast food networks of two American cities: Detroit and Pittsburgh. Testing hypotheses and using the Tobit model, the author showed that the network operators do not look for price uniformity even in company-owned units, that plural form networks have the highest degree of dispersion but that the price dispersion is higher in a pure franchised network than in a pure company-owned network. The results also suggest that fast food network operators lose the control of their pricing system to a greater extent when the network is franchised than when it is company-owned. Finally, a positive relationship between royalty rates and price dispersion is brought to the forefront.

In an article published in 1999, Michael asked a very operational question: Do franchise networks do enough advertising? In order to answer this question, the author used a multiple regression analysis based on data from two sectors: the restaurant industry and the hotel industry, while controlling variables such as network size, life cycle phase, geographic dispersion, market segment, alcohol sales, resources availability and quality. This last variable does not affect the results, despite the cost generated in ensuring it. It emerges from this that advertising costs decrease with the rate of franchised units. This tends to show the existence of opportunistic behavior from both the franchisors and the franchisees within a strongly franchised network. The author therefore advised, in franchised networks, the use of tools other than advertising to assure a differentiation and a competitive advantage. He proposed to found the marketing strategy of such networks more on the franchisees' energy and knowledge of the local market and on organizational learning, as Bradach (1997) and Sorenson and Sørensen (2001) also pointed out.

2.2 Other Models

Concerning channel management models from accounting data, Kaufmann, Gordon and Owers (2000) developed a model based on the hypothesis that certain operators seek to maximize the (long-term) economic value of their firm, while others prefer to maximize the accounting value and thus the net revenue. The "maximizers" of accounting value, solely interested in the efficiency of capital, will be more likely to opt for company-owned management, while the "maximizers" of economic value, conscious of the impact of the agency costs, will tend to lean towards franchise. The "maximizers" of accounting value are able to become "maximizers" of economic value by franchising their units after having bought them back: this was the memorable change in the strategy of PepsiCo which decided to franchise its Pizza Hut units in the 1990s after having bought them back in the 1980s (Rudnitsky 1995).

Frazer (2001) proposed a model to explain the rupture of the franchise process. Two reasons were advanced: the lack of franchisor support and the life cycle phase of the network. The implementation of a structural equations model, using the AMOS model, attempted to link these two variables with the rupture and the two following principal forms: conflict and company-owned conversion (or even re-selling or closure, even if these solutions are to be avoided in order not to compromise the public image of the trade name). The results, obtained in the Australian context, showed that the lack of franchisor support was not a significant reason for rupture. However, the life cycle phase is a significant reason for the rupture of the franchise process and especially at the end of the network development phase.

Marketing variables were used to explain the PCO: the rigidity of the marketing concept, the marketing concept improvement and/or innovation, the territory coverage, and the existence of services in the definition of the concept (Cliquet, Pénard, and Saussier 2002). Spatial variables were developed as well but mainly for strictly franchised networks (Ghosh and Craig 1991; Kaufmann and Rangan 1990; Kaufmann, Donthu, and Brooks 2000).

All the research papers mentioned above underline the advantages of mixing both franchising and company arrangement within the same network. Indeed, the plural form seems to enhance synergies and contributes to an increase in the network's performance. The empirical studies have always focused on a particular market, mainly the United States or France, but also Australia, Austria, Germany, or Spain. However, there has not been any comparison of the managerial practices of these countries when the plural form is used by the franchisors.

The first purpose of the empirical research developed in the second part of this paper then is to compare the implementation of plural form within the US and French networks. Do the US and French franchisors tend to mix franchising and company arrangement in the same manner? If not, which kinds of network and/or market features could help to explain these differences?

The second purpose of this paper is to try to identify the main features in the existence of plural form. Are there any significant differences between retail and service networks? Some explanatory variables of this plural form are highlighted. The degree of plural form is measured by the PCO as was done in most of the previous research papers. Recent data concerning about one thousand US and French networks are used.

3 Research Design

3.1 Data

Two countries are chosen to compare the existence of the plural form within the networks: the United States and France. In these two countries many service and retail companies widely use franchising to develop their business. For instance, there are 1,500 franchised networks and 760,000 franchisees in the United States, whereas

765 networks and 34,745 franchisees can be found in France (World Franchise Council statistics, 2004). These two countries are very different in terms of area: 9.6 million km² for the US territory and 551.5 thousand km² for the French territory.

US data were recorded from the Entrepreneur's 25 Annual Franchise 500® ranking (2004). The information are for the year 2003. The French data were recorded from the 2004 franchising directory published by the French Federation of Franchising. The information are therefore for the year 2003 as well.

Of course, these secondary data sources present some limitations. The first one deals with the non-exhaustive aspect of such directories. Indeed, the published data are based on franchisors responding to the surveys. It is impossible to estimate response rates associated with these two national surveys confidently. The second limitation concerns the over-representation of networks in the development phase. They publish their data in order to attract potential franchisees. Despite these limitations, these databases remain the best secondary sources of data in France and the US.

Descriptive statistics for the main variables (except plural form ones which are presented in the next section) are displayed in Table 1. In summary, French networks:

- are older, smaller and less international than the US networks;
- require an average total investment, an average franchising fee, an average ongoing royalty fee, a net worth and cash liquidity inferior to those required by the US networks;
- are characterized by a term of agreement which is shorter than that for the US networks.

3.2 Variables

The main purpose of this paper is the comparison of the existence of the plural form within the US and French franchised networks. This plural form was operationalized using several indicators as follows:

- Plural form 1 corresponds to the PCO within the network in the domestic market. It varies between 0%, i.e. the network is purely franchised, to 100%, i.e. the network is purely company-owned.
- A first categorization of the plural form, named Code 1, was built as indicated in Table 2.
- Plural form 2, coded from 0% to 50%, corresponds to:
  - the PCO if it is lower than or equal to 50%,
  - 100% - the PCO if it is higher than 50%,

  in the respective domestic market.

Table 1. Descriptive Statistics for the Main Features of the French and US Networks

	Country	N	Mean	Standard Deviation
Year company started	France	109	1975	25.57
	USA	471	1974	92.45
Year franchising started***	France	453	1990	13.73
	USA	471	1986	11.91
Experience before franchising	France	110	29.54	188.38
	USA	471	11.64	92.25
Franchised network age	France	456	27.50	161.60
	USA	471	18.46	11.91
Number of franchised units***	France	453	57.43	115.74
	USA	469	479.94	1,275.11
Number of company-owned units**	France	454	26.77	56.85
	USA	469	76.52	493.54
Network size in the domestic market***	France	457	83.52	135.73
	USA	471	554.10	1,551.86
Total network size***	France	457	140.20	585.67
	USA	471	762.46	2,558.68
Internationalization***	France	456	0.48	0.50
	USA	471	0.69	0.46
Average total investment (in K€)***	France	371	217.57	456.27
	USA	471	625.91	2,714.71
Average franchising fee (in K€)***	France	457	12.06	11.97
	USA	471	28.66	29.63
Average ongoing royalty fee (in %)***	France	341	4.10	4.03
	USA	471	4.88	3.07
Term of agreement (in years)***	France	428	5.79	2.38
	USA	434	11.41	5.18
Net worth requirement (in K€)**	France	371	217.57	456.27
	USA	319	301.68	396.06
Cash liquidity requirement (in K€)	France	290	86.98	103.53
	USA	381	102.40	140.21

Notes:

**** indicates the significance at the 0.01 level for the t-test and the Levene statistics*

*** indicates the significance at the 0.05 level for the t-test and the Levene statistics*

Table 2. First Categorization of the Plural Form

Plural form 1	Code 1
0% - 10%	1
10% - 20%	2
20% - 30%	3
30% - 40%	4
40% - 50%	5
50% - 60%	6
60% - 70%	7
70% - 80%	8
80% - 90%	9
90% - 100%	10

Table 3. Second Categorization of the Plural Form

Plural form 2	Code 2
0% - 10%	1
10% - 20%	2
20% - 30%	3
30% - 40%	4
40% - 50%	5

Therefore, if Plural form 2 is equal to 0% then the network is either purely franchised or purely company-owned. And, if plural form 2 is equal to 50% then the network is considered as a plural form network.

Whereas the variable Plural form 1 enables to distinguish at least three kinds of networks: plural form, predominantly franchised and predominantly company-owned ones, this variable, Plural form 2, only opposes the plural form networks to the other ones whatever the form that predominates in these networks. These two variables, Plural form 1 and Plural form 2, can be considered as complementary.

- A second categorization of the plural form, named Code 2, was built as indicated in Table 3.

3.3 Methodology

Descriptive statistics were used in this paper to compare the existence of the plural form according to the market: US vs. French, and to the sector: retailing vs. services. In order to test if the differences were significant or not, t-test and Levene statistics were implemented. Furthermore, regressions are used to underline the determinants of the existence of the plural form.

4 Results

4.1 Plural Form: France Versus the United States

According to the t-test and the Levene statistics, whose results are displayed in Table 4, the existence of the plural form significantly differs between the US networks and the French networks. Indeed, the plural rate coded from 0% to 100%, Plural form 1, is significantly higher within the French networks (36.09%) than within the US networks (9.45%). Similarly, the plural rate coded from 0% to 50%, Plural form 2, is significantly higher within the French networks (17.85%) than within the US networks (6.88%). Clearly plural form is more widely used in the French franchising market than in the US one.

Table 4. Plural Form in the French and the US Networks

	France	USA
N	443	467
Plural form 1 ***	36.09	9.45
(Standard Deviation)	(33,32)	(18.80)
Plural form 2 ***	17.85	6.88
(Standard Deviation)	(16.37)	(11.74)

*Note: *** indicates the significance at the 0.01 level for the t-test and the Levene statistics*

Table 5. Distribution of the Existence of the Plural Form in the French and US Franchising Industries

		France	USA			France	USA
	N	443	467		N	443	467
Code 1	1	32.7 %	77.9 %	Code 2	1	42.70 %	78.8 %
	2	12,0 %	7.7 %		2	18.1 %	8.6 %
	3	7.2 %	3.0 %		3	12.6 %	4.1 %
	4	8.1 %	3.4 %		4	13.8 %	5.6 %
	5	7.4 %	1.9 %		5	12.9 %	3.0 %
	6	6.3 %	1.3 %				
	7	5.0 %	1.9 %				
	8	5.4 %	1.1 %				
	9	6.1 %	0.9 %				
	10	9.7 %	0.9 %				

Table 5 and figure 2 illustrate the distribution of the existence of the plural form in the US and French franchising industries. The two categorizations described in the methodology section were used. The same comments can be drawn: most of the US franchisors (in fact, more than 75% of them) focus on franchising to develop and manage their networks.

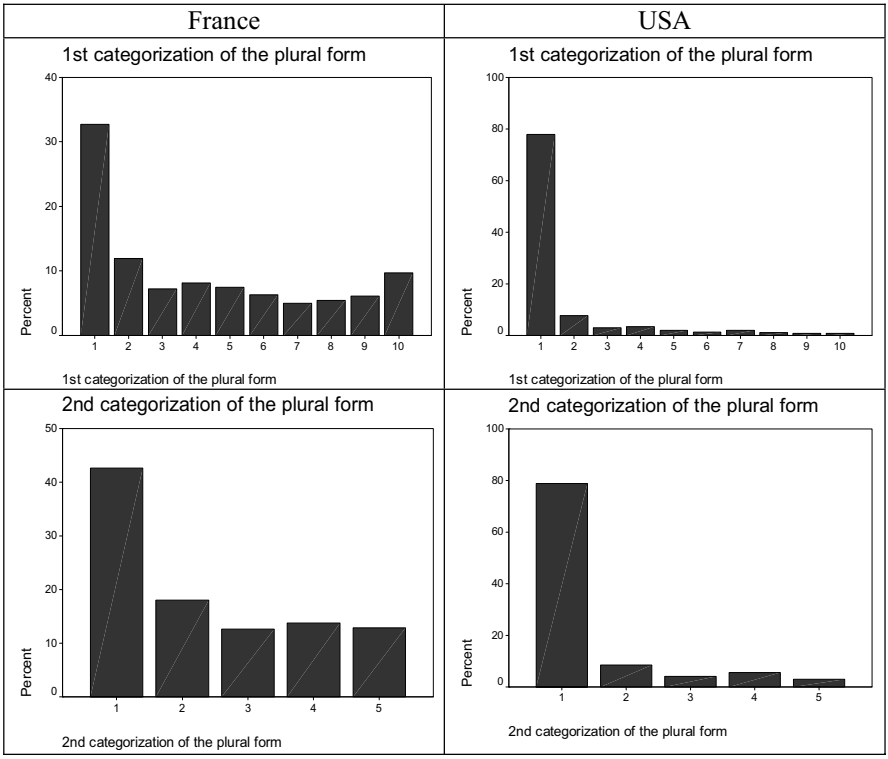


Fig. 2. Distribution of the Existence of the Plural Form in the French and US Franchising Industries

4.2 Plural Form: Retailing Versus Services

According to the t-test and the Levene statistics, whose results are displayed in Table 6, the existence of the plural form differs according to whether the network belongs to the retailing or the service sector. In France, plural form is more used in retail networks than in service ones, and this difference is significant. In the United States, the same tendency is identifiable but the difference is less important in value and is not significant. To sum up, plural form is more broadly used in the retail sector than in the service sector.

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Table 6. Plural Form: Retailing vs. Services

		France			USA		
	Sector	N	Mean	Standard deviation	N	Mean	Standard deviation
Plural form 1	Retailing	174	44.80	32.89	71	12.26	21.72
	Services	269	30.45	32.42	396	8.95	18.22
Plural form 2	Retailing	174	21.14	16.48	71	7.88	10.82
	Services	269	15.72	15.97	396	6.70	11.90

Table 7. Plural Form: A Modelling Attempt

	France			USA		
	Coef	Standard error	Sig	Coef	Standard error	Sig
(constant)	28.472	7.397	.000	6.845	3.561	.056
Network age	.180	.177	.310	-.318	.095	.001
Network size in the domestic market	-1.600E-02	.021	.456	-6.545E-05	.001	.936
Average total investment in K$ or K€				4.995E-03	.002	.023
Average franchising fee in K$ or K€	-.940	.249	.000	-4.907E-02	.053	.356
Average ongoing royalty fee in %	-.259	.611	.672	.567	.365	.121
Term of agreement in years	2.445	1.281	.058	8.833E-02	.232	.704
Net worth requirement in K$ or K€	4.888E-03	.011	.651	1.566E-02	.008	.040
Cash liquidity requirement in K$ or K€	8.367E-02	.042	.050	6.437E-03	.019	.738
R^2	0.107			0.217		
F	3.602			9.862		
Sig	0.001			0.000		

4.4 Plural Form: A Modelling Attempt

Regression models were used to underline the determinants of the existence of the plural form. The results are depicted in Table 7. The explanatory power of the model is not satisfactory ($R^2 = 0.107$ for the French market, $R^2 = 0.217$ for the US market).

As far as the French networks are concerned, it can be noticed that the average franchising fee is a significant (at the level 0.01) and negative determinant of plural form 1, the term of agreement is a significant (at the level 0.10) and positive determinant of plural form 1, and the cash liquidity requirement is a significant (at the level 0.05) and positive determinant of plural form 1.

As far as the US networks are concerned, the network age is a significant (at the level 0.01) and negative determinant of plural form 1, the average total investment is a significant (at the level 0.05) and positive determinant of plural form 1, and the net worth requirement is a significant (at the level 0.05) and positive determinant of plural form 1. These results confirm those of previous research works described in the first part of this paper.

In conclusion, the determinants of the plural form are not the same in the US and the French networks.

5 Discussion

5.1 Summary of the Results

This paper has highlighted some important differences in the existence of plural form that could be explored further in future research:

- Plural form is more broadly used in France than in the US, maybe due to the difference in the territory area or for tax or social cost reasons.
- Plural form is more broadly used in the retail sector than in the service sector, perhaps due to the greater involvement of the franchisees towards their customers in their unit. This personal involvement is very important in service activities such as restaurants, hotels, hairdressers, etc.
- The determinants of the plural form seem to vary according to the market. More research is needed to highlight the main determinants of this plural form arrangement.

5.2 Research Implications

The findings concerning the differences in the existence of the plural form between France and the United States reinforce the insights of the agency theory and specifically the monitoring costs. Indeed, it will be easier to monitor the managers of the company-owned units in a small country such as France than in a large country such as the United States. Agency theory is therefore useful to understand

the focus on franchising to manage the units in a large country such as the United States. Another explanation may have its origins in cultural differences. Indeed, there is an important centralization of power within the French businesses compared to the US case. Moreover, a French entrepreneur has to manage at least one unit for at least a year as a legal obligation, and a French franchisor has to be able to run three units over two years, or two units over three years if he/she wants to meet the French (and now European) deontology code requirements.

The methodological contribution of this paper mainly deals with the comparison of two different franchising markets. Indeed, previous papers on plural form were one-country studies. For instance, Bradach (1997; 1998) or Lafontaine and Shaw (1999a, 2005) focused on the US market whereas Cliquet (2000), Lopez and Gonzales-Busto (2001), Windsperger (2004) or Ehrmann and Spranger (2004) investigated European markets and Frazer (2001) the Australian market. Here two different franchising markets: France and the United States are compared. It appears that comparative studies are meaningful, particularly because of the network internationalization, in order to develop the literature on franchising.

As far as the managerial implications are concerned, this paper has emphasised the link between the existence of the plural form within the franchised networks and the territory area. Indeed, plural form is more widely used in a small country such as France whereas it is less used in large countries such as the US. This link highlights the need for the franchisor to consider the geographical distance in the development of his/her network. Indeed, the existence of the plural form varies according to the market in which the franchisor wants to develop his/her network. This question will not only interest the new franchisors who develop their networks in the domestic market but also all the franchisors who expand their networks at the international level. Even though new technologies such as Intranet and Internet favor communication within the networks, franchisors must not forget that geographical distance between headquarters and the franchised units will lead to human and control problems.

Moreover, the franchisors must adapt their PCO to the sector in which they work. It seems easier to manage a plural form network with a low PCO, which means more company-owned units within the retail sector, whereas more franchised units seems to facilitate management in the service sector. In this sector the role of the franchisees is more important because they do not sell a standardized product to their customers but offer them a service that is often personalized. However, the presence of company-owned units enables better control over the concept uniformity.

5.3 Research Limitations and Perspectives

A first limitation of this paper is linked with the empirical study. Indeed, only two countries were investigated: the United States and France to explore the existence of the plural form. In the next step of this research other countries such as Brazil,

China, India, Great Britain, Spain, etc. will be integrated. International franchising is still in the construction phase.

A second limitation of this research concerns the methodology. Descriptive statistics were mainly used. If the empirical study were to focus on several countries, as suggested above, it would be relevant to use more regression models in order to test the influence of the territory area and other variables on the existence of the plural form within the franchised networks quantitatively. Some other factors linked with the national entrepreneurial activity could be also considered.

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The Governance Structure of Franchising Firms: A Property Rights Approach

Josef Windsperger and Askin Yurdakul[1]

Abstract. Previous studies in franchising research do not explain the governance structure of franchising firms as an institutional entity that consists of two interrelated parts: Allocation of residual decision rights and transfer of ownership rights. This paper fills this gap in the literature. According to the property rights view, decision rights have to be allocated according to the distribution of intangible knowledge assets between the franchisor and franchisee and ownership rights have to be assigned according to the residual decision rights. Since ownership rights are diluted in franchising networks, the dilution of residual income rights of franchised outlets is compensated for by setting up company-owned outlets. According to the property rights view, an efficient governance structure of the franchising firm implies allocation of residual decision rights according to the distribution of intangible assets between the franchisor and the franchisee and transfer of ownership rights according to the distribution of residual decision rights. We empirically investigate the influence of intangible knowledge assets on residual decision rights by using a logistic and ordinal regression model and the relationship between residual decision and ownership rights by using a simultaneous equation model on a sample of 83 firms from the Austrian franchise sector. Three hypotheses were derived from the property rights approach and tested. The empirical results are generally supportive of the hypotheses.

Keywords. Governance, franchising, knowledge assets, decision rights, residual income rights

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1 Introduction

Previous research on the institutional structure of franchising networks (Brickley et al. 1991; Lutz 1995; Shane 1998; Lafontaine and Shaw 1999, 2005; Affuso 2002; Penard et al. 2003a,b) does not explain the governance structure of the franchising firm as an *institutional entity* that consists of two interrelated parts: Residual decision rights and ownership rights. The latter includes not only residual income rights of franchised outlets but also residual income rights of franchisor-owned outlets. Previous studies primarily examines the incentive, signalling and screening effects of fees, royalties and other contractual provisions from the point of view of organizational economics (see Dnes 1996 for a review) without taking into account the interactions between residual decision and residual income rights as interrelated parts of the governance structure. This paper fills this gap in the literature. According to the property rights view, decision rights should be allocated according to the distribution of intangible knowledge assets between the franchisor and franchisee and ownership rights should be assigned according to the residual decision rights. Since ownership rights are diluted in franchising networks, the dilution of residual income rights of franchised outlets is compensated by residual income rights of company-owned outlets. Under a dual ownership structure, company-owned outlets compensate the disincentive effect of low royalties for the franchisor, and low royalties strengthen the investment incentives for the franchisee. Therefore, due to the dual incentive effects of royalties, royalties and company-owned outlets are substitutes. In this paper, first we develop a property rights view of the governance structure of franchising firms, and second we empirically investigate the influence of intangible knowledge assets on residual decision rights by using a logistic and ordinal regression model and the relationship between residual decision rights and ownership rights (royalties and the proportion of company-owned outlets) by using a simultaneous equation model. Three hypotheses are derived from the property rights approach and tested in the Austrian franchise sector. The empirical results are generally supportive of the hypotheses.

This paper is structured as follows: We start with a review of the relevant literature. Next we discuss the main propositions of the property rights approach, based on Barzel (1989), Hart and Moore (1990) and Jensen and Meckling (1992). We then use this property right approach to examine the governance structure of the franchising firm. First we investigate the relationship between the characteristics of knowledge assets and the allocation of decision rights in franchising networks. Second we develop the property rights propositions about how to structure the residual decision and ownership rights between the franchisor and franchisee. Finally, we derive three hypotheses and empirically investigate these hypotheses in the Austrian franchise sector.

2 Literature Review

Although franchising has been dealt with extensively in organizational economics and management literature, the relations between residual decision and ownership rights in franchising firms remain largely unexplored. Most studies have focused on the explanation of the incentive structure (fees, royalties, and other contractual restrictions) (for a review, see Lafontaine and Slade 2001) and the proportion of company-owned outlets (Dant et. al. 1996; Lafontaine and Shaw 2005; Dahlstrom and Nygaard 1999; Bai and Tao 2000; Penard et al. 2003a; Affuso 2002) without investigating the governance structure as an institutional entity consisting of residual decision and ownership rights. However, in the last years some authors have pointed out that the efficiency of the franchising network can be only determined if we take into account the interaction effects between the different contractual provisions. Brickley (1999) presented an agency cost explanation of the complementarities between advertising and area development plans, restrictions on franchisee's outside activities and area development plans, and between advertising and restrictions of outside activities. Berkovitz (2000) applies transaction cost reasoning to analyze interactions between contract provisions. Furthermore, Lafontaine and Raynaud (2002) examined complementarities between residual claimancy rights and self-enforcement mechanisms, such as exclusive territory clauses, multi-unit ownership guarantees, contract renewal and termination rights. Although Elango and Fried (1997) already called for investigations addressing issues concerning decision and ownership rights, Arrunada et al. (2001) were the first researchers in organizational economics that explicitly analyzed the relationship between decision rights, monitoring and incentive mechanisms in automobile franchise contracts. They found some complementarities between completion and termination rights, and between monitoring rights and incentives in the automobile distribution. They derive the hypotheses from the agency theory, self-enforcement theory, and multi-tasking theory (Klein and Murphy 1988; Holmstrom and Milgrom 1994).

Our paper is related to a number of ideas that have appeared elsewhere in the organizational economics literature. Wernerfelt (2002) and Brickley et al. (2003) argue that if a person (e.g. a local manager in bank offices) has specific knowledge that creates the residual income stream, it is important to locate residual decision and ownership rights jointly. Another closely related paper is Aghion and Tirole (1997) which is primarily concerned with the allocation of 'real' and 'formal' authority. According to Aghion and Tirole, the person with formal authority will exercise real authority if he actually has the relevant information. In addition, Stein (2002) argues that decentralization is more likely under "soft" than under "hard" information because "soft" information cannot be directly verified by anyone other than the agent who produces it. Furthermore, based on Milgrom and Roberts (1995) and Brickley et al (1996), Nagar (2002) and Demers et. al (2002) find that the allocation of decision rights is a determinant of incentive compensation. Moreover, Rajan and Zingales' concept of access to critical resources is closely

related to our view (Rajan and Zingales 1999, 2001; Zingales 2000). They argue that power stems from control over (access to) critical assets that generate the residual income stream, but not primarily from ownership of assets – as argued by Grossman, Hart and Moore (Grossman and Hart 1986; Hart and Moore 1990). Hence the regulation of access (as ability to use a critical resource) refers to the problem of allocating residual decision rights.

Starting from the research deficit that the relationship between knowledge assets, residual decision rights and ownership rights in franchising networks has not been explained yet, the objective of our paper is to develop a property rights view of the governance structure of franchising firms. Our approach can be summarized as follows. Knowledge assets (intangible system-specific and local market assets) determine the allocation of residual decision rights, and the structure of residual decision rights influences the allocation of ownership rights between the franchisor and the franchisee.

3 A Property Rights View of the Governance Structure

The property rights theory starting from Alchian (1965), Demsetz (1967) and Barzel (1987, 1989) tries to solve two interrelated problems: The allocation of residual decision rights as "division- of-knowledge" problem and the allocation of ownership rights as incentive problem (Langlois 2002a, 27).

3.1 Allocation of Decision Rights

Hayek (1935) already pointed out that centralization of decision-making is only efficient if the central planer has the knowledge that is specific in time and place. March and Simon (1958) applied similar ideas to the design of organization. Due to the CEO's limited information processing capabilities organizations must delegate decision making. Based on the property rights theory, Jensen and Meckling (1992) argued that organizational efficiency requires that those with the responsibility for decisions also have the knowledge valuable to those decisions. Co-location of decision rights with knowledge can be achieved by transferring the knowledge to the person who has the decision right or by transferring the decision rights to the person with the knowledge. This means that knowledge transfer costs determine the degree of centralization of decision making. Decision rights tend to remain in the CEO's office when the costs of transferring knowledge to the central office is low, and decision rights tend to be delegated to lower levels of the hierarchy when the firm primarily produces knowledge that is costly to transfer to the CEO (Malone 1997).

The relevant question is which factors influence the knowledge transfer costs. According to the property rights approach (Hart and Moore 1990; Barzel 1989) the structure of decision rights depends on the relation between tangible (con-

tractible) and intangible (non-contractible) knowledge assets. First, if the knowledge can be codified, it is easily transferred by contract. In this case non-residual decision rights (as decision actions) are explicitly stipulated in contracts (Demsetz 1998). This more explicit, tangible type of knowledge is akin to what Kogut and Zander (1992, 1993, 1995) call information. Second, if the knowledge cannot be codified due to its tacit characteristics, residual decision rights must be allocated because it cannot be easily communicated and specified in contracts due to too high transaction costs. Hence knowledge assets with more idiosyncratic and tacit characteristics, that is akin to what Itami (1984) call "invisible" resources, Kogut and Zander call know-how and von Hippel (1994) refer to "sticky" information, have a high degree of intangibility (noncontractibility) (Contractor and Ra 2002). Since it is difficult to specify decision actions in contracts under intangible knowledge assets, the person who has the intangible knowledge assets that generates the residual surplus should have the residual decision rights to maximize the residual income. Consequently, given the distribution of intangible knowledge assets the maximum resource value obtains if the decision rights are assigned to those who are best able to use these assets. This view is compatible with Rajan and Zingales approach that the person with access to critical assets should have the power or authority (Rajan and Zingales 2001; Malone 1997; Wruck and Jensen 1994). The relationship between knowledge assets and decision rights can be stated by the following property rights proposition: The more intangible knowledge assets one person has relative to another person, the more important are his assets for the generation of residual income, and the more residual decision rights should be assigned to that person.

3.2 Structure of Ownership Rights

Co-location of knowledge assets and decision rights is only sufficient for designing an efficient organization structure if no agency problems arise. In reality, however, motivation problems result in adverse selection, moral hazard and hold-up problems. In this situation, allocation of decision rights not only results in lower information costs due to co-location of knowledge and decision rights but also in additional agency costs (Jensen and Meckling 1992). To alleviate this incentive problem, ownership rights as residual income rights should be assigned to the person potentially best equipped to increase the residual income. By combining asset ownership with the residual decision rights that create a high residual surplus, strong incentives are generated to realize the highest value of asset usage. This is compatible with the view of Wernerfelt (2002), Brickley et. al (2003), Nagar (2002) and Demers (2001) that complementarity between between residual decision and ownership rights increases the residual income generating effect of decision rights. The relationship between decision and ownership rights can be stated by the following proposition: The more residual decision rights a person has due to his intangible knowledge assets, the more residual income rights should be transferred to him.

4 Explaining the Relationship Between Knowledge Assets, Residual Decision and Ownership Rights

Now we examine the relationship between knowledge assets and decision rights and between decision and ownership rights.

4.1 Knowledge Assets and Decision Rights

The relevant question is which knowledge assets are generated and used in franchising networks and how are the decision rights allocated. The franchisor faces the problem of maximizing the returns to his intangible system-specific assets when they are dependent on investments in local intangible assets of the franchisee (Caves and Murphy 1976). Based on Hall's view of knowledge assets (Hall 1993), the franchisor's intangible knowledge assets refer to the system-specific know-how and the brand name assets as reputation capital (Klein and Leffler 1981; Doyle 1990) that are characterized by a low degree of contractibility because they have an important tacit component. The system-specific know-how includes knowledge and skills in site selection, store layout, product development and procurement (Kacker 1988). The brand name assets refer to intangible investments in system marketing and promotion as signalling device to reduce information asymmetry between the firm and the customers (Norton 1988; Gonzales-Diaz and Lopez 2002). The franchisee's intangible knowledge assets refer to the outlet-specific know-how as 'exploration' and 'exploitation' capabilities (March 1991; Sorenson and Sorensen 2001). The first include local market knowledge and innovation, and the latter include quality control, human resource management and administrative capabilities (Wicking 1995). Since the 'exploration' capabilities show a higher degree of tacity than the 'exploitation' capabilities, their contractibility is lower.

How does the distribution of intangible knowledge assets influence the allocation of residual decision rights in franchising networks? Generally we can differentiate between strategic and operative decisions. Strategic decisions are primarily made by the franchisor and operative decisions are divided between the franchisor and the franchisee. Operative decisions include marketing decisions (price, product, promotion, service), human resource decisions and procurement decisions. According to Jensen and Meckling (1992), two ways for allocating decision rights exist: Either knowledge must be transferred to those with the right to make decisions or decision rights must be transferred to those who have the knowledge. This means that decision rights tend to be centralized in the franchising network when the costs of transferring knowledge to the franchisor are relatively low. This is the case when the franchisor's portion of intangible knowledge assets is relatively high compared to the franchisee. In this case he has a strong bargaining power, due to his system-specific assets, and can easily acquire the local market knowledge of the franchisee, due to its low degree of intangibility. On the other hand, residual decision rights

have to be delegated to the franchisee when his local market know-how is very specific and consequently the knowledge transfer costs are very high (Malone 1997; Brickley et al. 2003). In this case the bargaining power of the franchisee is relatively strong due to his non-contractible local market assets. Both the franchisor and the franchisee have to undertake specific investments to generate a high ex post surplus. Consequently, if it is important to take advantage of franchisee's intangible knowledge assets to generate the residual income stream, he must be transferred residual decision rights to utilize his specific knowledge.

4.2 Allocation of Residual Income Rights

The franchisor and the franchisee's incentive to use the intangible knowledge assets (system-specific and local market assets) to maximize the residual income stream are increased when the person who has the residual decision rights also has the residual income rights. In franchising firms residual income rights consist of the following components: Initial fees and royalties, and the proportion of company-owned outlets.

4.2.1 Initial Fees and Royalties

Initial fees are the remuneration for the system-specific know-how (brand name assets) transferred to the franchisee at the beginning of the contract period (Klein and Leffler 1981). The higher the franchisor's intangible brand name assets at the beginning of the contract period, the higher the rents generated by his system-specific know-how and the higher the initial fees. In addition, the more important the franchisor's system-specific investments are relative to the franchisee's intangible investments during the contract period, the higher the fraction of residual income created by him, and the higher the royalties should be (Rubin 1978; Lutz 1995). Conversely, the more important the franchisee's intangible local market investments are relative to the franchisor's intangible investments, the higher his fraction of the residual income and the lower the royalties to provide the necessary incentive for the franchisees should be. Moreover, the property rights view suggests a positive relationship between initial fees and royalties: The higher the franchisor's system-specific assets and his reputation capital, the more intangible investments are necessary during the contract period to maintain a certain brand name value, and the higher the royalties as residual income rights are. Empirical evidence of a positive relationship between initial fees and royalties was found in the Austrian franchise sector (Windsperger 2001). These results are consistent with Dnes (1993) view. According to Dnes the franchisor may recover his sunk investments through the initial fee because high sunk investments may arise when the system-specific know-how is very important for the success of the franchise. On the other hand, this incomplete contracting view is not compatible with the agency theory (see Lafontaine and Slade 2001) that predicts a negative relationship between fees and royalties.

4.2.2 Mix of Franchised and Company-Owned Firms

Since the transfer of outlet rights to the franchisee dilutes the franchisor's residual income rights, his incentive to untertake system-specific investments is attenuated. This disincentive effect is higher, the lower the fees and royalties are. On the other hand, royalties serve as incentive mechanism for the franchisee to untertake intangible local market investments. The lower they are, the larger his fraction of residual income rights is. To increase the franchisor's residual income position and his investment incentive without mitigating the franchisee's investment incentive by raising fees or royalties, company-owned outlets may compensate the diluted residual income rights at the franchised outlets. How can this dual structure be explained? According to the property rights view, the more important the franchisor's intangible assets relative to the franchisee for the generation of residual income, the more property rights must be transferred to him, and the higher the percentage of company-owned outlets is. Hence if the franchisor has a large fraction of residual decision rights due to the more important intangible system-specific assets compared to the intangible local market assets, the percentage of company-owned outlets (PCO) should be relatively high; on the other hand, if the local market assets of the franchisee are relatively important compared to the system-specific assets, the franchisee's fraction of residual decision rights should be relatively high and, consequently, the PCO should be relatively low. Therefore, the know-how distribution between the franchisor and franchisee may explain sectoral differences. Empirical results indicate that the PCO in product franchising is considerably higher than in the services sector (e.g. Lafontaine and Shaw 2005; Penard et al. 2003a).

4.2.3 Interaction Between Company-Owned Outlets and Royalties

Since residual income rights include company-owned outlets and royalties, the PCO and the royalty rate must be simultaneously determined. According to Rubin (1978) and Scott (1995) royalties and franchisor-owned outlets are substitutes. Thus the lower the royalties, the higher are the PCO to maintain the franchisor's investment incentive. This may be explained by the dual incentive effects of royalties. Royalties are the residual income for the franchisor to invest in system-specific assets, but setting a positive royalty rate dilutes the incentive effect for the franchisee to invest in local market assets. To ensure the franchisor's investment incentive under a low royalty rate, residual income rights are transferred to him by setting up company-owned outlets. Hence, contrary to the agency-theoretical view (e.g. Penard et al. 2003b), company-owned outlets function as a substitute for the diluted residual income rights of franchised outlets.

Which factors influence the relationship between royalties and the PCO? According to the property rights view, the interaction effect between PCO and royalties depends on the importance of intangible system-specific assets relative to the local market assets for the creation of residual surplus. (a) If the system-specific assets are very important for the generation of residual income, a high fraction of ownership

rights must be transferred to the franchisor. In this case the diluted residual income rights of the franchised outlets are compensated by a relatively high PCO. (b) On the other hand, if the local market assets and the system-specific assets are very important for the creation of residual surplus, more residual income rights must be transferred to the franchisee. Compared to (a), the franchisee pays relatively lower royalties and the dilution of the franchisor's residual income rights is compensated by a higher PCO. We may conclude that the negative interaction between royalties and PCO depends on the bargaining power of the franchisor and the franchisee, i.e. on the importance of intangible system-specific assets relative to the local market assets for the creation of residual surplus of the network.

4.3 Property Rights Hypotheses

By applying the complementarity view of the organization structure (Milgrom and Roberts 1995; Brickley, Smith and Zimmerman 1996), the franchisor and the franchisee's motivation to use the knowledge assets to generate the residual income stream is increased if the residual decision rights are allocated according to the distribution of intangible knowledge assets and the residual income rights are co-located with the residual decision rights. Consequently, the relationship between knowledge assets, residual decision rights and ownership rights can be stated as follows:

If the franchisor's intangible system-specific assets have a strong impact on the total residual surplus relative to the franchisee's intangible market assets, the franchisor should have a large fraction of residual decision rights. Hence we derive the following hypothesis:

H1: Increases in intangible knowledge assets of the franchisor relative to the franchisee will lead to a higher share of residual decision rights of the franchisor.

If the franchisor has a large fraction of residual decision rights due to the importance of his intangible knowledge assets, the franchisor should get a large fraction of residual income rights. His fraction of residual income rights is higher, the higher the royalties/fees are and the more the diluted residual income rights at the franchised outlets are compensated by company-owned outlets. Hence we derive the following hypothesis:

H2: Increases in residual decision rights of the franchisor relative to the franchisee will lead to a higher fraction of ownership rights of the franchisor.

Diluted residual income rights at the franchised outlets are compensated by residual income rights of company-owned outlets. Hence royalties and PCO are substitutes.

H3: Royalties and the proportion of company-owned outlets are negatively related.

5 Empirical Analysis

The empirical data for the test of these hypotheses were collected from the franchising sector of Austria. Since Lehman (1985) advocates sampling all significant entities in industrial surveys, we commenced our empirical work by first obtaining the complete list of all franchise systems in Austria that were registered members of the Austrian Franchise Association (AFA) in 1997. The directory identified a total of 216 franchised systems in Austria, and it is estimated that more than 90% of all franchise systems operating in Austria are listed in the directory of AFA. Hence, the AFA directory provided the most comprehensive listing of franchise systems operating in Austria. A national mail survey was utilized in the actual data collection, which occurred in the 1997-1998.

After several preliminary steps in questionnaire development and refinement, including in-depth interviews with select franchisors in Vienna and the representatives of the AFA, the final version of the questionnaire was pre-tested with 6 franchisors. The questionnaire took approximately 20 minutes to complete on the average. The revised questionnaire, which incorporated the alterations suggested by the pretest, was mailed to all 210 franchisors listed in the directory of AFA (216 total franchisors less 6 utilized in the pretest). We received 83 completed and usable responses.

An estimation of non-response bias was carried out. Non-response bias was estimated by comparing early versus late responders (Armstrong and Overton 1977), where late responders serve as proxies for non-respondents. Operationally, the late respondents' pool comprised of firms that completed the questionnaire four weeks after the first group. The comparisons were carried out across theoretical variables as well as demographic classification measures. No significant differences emerged between the two sub-groups of respondents.

5.1 Measurement

The various measures used to test the hypotheses are described below (see appendix).

Knowledge Assets – Franchisor's knowledge assets: Based on indicators used in earlier studies (e.g. Lafontaine 1992; Fladmoe-Lindquist and Jaque 1995) two proxies for the franchisor's system-specific assets and brand name assets are used: Training days (initial and annual training) and advertising fees. The number of training days is an indicator of the importance of the franchisor's system-specific know-how to generate the residual income of the network. The assumption behind this measure is that as intangibility of knowledge assets increases, so does the number of days of face-to-face interaction. As argued by Simonin (1999), the higher the degree of intangibility, the less contractible are the knowledge assets, and the more personal (face-to-face) knowledge transfer methods are used, such as telephone, meetings, coaching and training. A similar measurement concept was used by Argote (2000) and Darr et. al (1995). The indicator for the importance of the franchisor's brand name assets to generate the residual income stream is the

advertising fee that the franchisees are required to pay to the franchisor (Lafontaine and Shaw 2005; Agrawal and Lal 1995). The more important the franchisor's brand name assets for the generation of the residual surplus, the more marketing investments (national advertising and promotion measures) are required to maintain the brand name value, and the higher the advertising fees paid by the franchisees are.

Franchisee's knowledge assets: The franchisee's intangible knowledge assets refer to the franchisee's local market know-how consisting of 'exploration' and 'exploitation' capabilities. Since it was not possible to receive data from the franchisees, the franchisee's intangible knowledge assets are assessed by the franchisor. In the questionnaire the franchisors were asked to rate on a five-point scale to evaluate franchisee's intangible assets (see appendix). We used the following indicators to measure the 'exploration' and 'exploitation' capabilities advantage of the franchisee compared to the manager of a company-owned outlet: Based on March (1991), Bradach (1998), Lewin (1998) and Sorensen and Sørensen (2001), the domain of the content of 'exploration' capabilities refers to innovation and local market knowledge, and the domain of the content of 'exploitation' capabilities refers to quality control and administrative capabilities. We used formative indicators because the constructs are defined by theoretical judgement and produced by the indicators representing the domain of the content (Diamantopoulos and Winkelhofer 2001; Edwards and Bagozzi 2000). If we omitted an indicator, the content of the construct would change (Bollen and Lennox 1991, 308). For instance, if innovation were removed from 'exploration' capabilities, this would change the essential nature of this construct. Since innovation and local market knowledge are characterized by a higher degree of tacity than adiministrative and quality control capabilities, 'exploration' capabilities show a higher degree of intangibility (noncontractibility) than 'exploitation' capabilities.

Decision Rights: Residual decision rights include the following decisions in the franchise network: procurement decision, price and product decisions, advertising decision, human resource decisions (recruitment and training), investment and finance decisions and decisions concerning the application of accounting systems. The decision index addresses the extent to which residual decisions are made by the franchisor and the franchisee. Hence it is a measure of decentralization/centralization of decision making in the network. The franchisors were asked to rate the franchisee's influence on these decisions on a seven-point scale. By averaging the scale values we constructed a decision index varying between 1 and 7. The higher the index, the higher the franchisee's influence on residual decision-making is. Consequently, the decision measure varies positively with the degree of decentralization and negatively with the degree of centralization of decision-making.

Ownership Rights: These refer to residual income rights of the franchised outlets (initial fees, royalties as percentage of sales) and the percentage of company-owned outlets.

Number of Outlets: According to the transaction cost theory the set-up costs of the franchisor's headquarter may influence the tendency toward centralization. The more outlets are coordinated by the central office, the larger the coordination economies of scale are (Brickley et al. 1991), and hence the higher the tendency toward centralization is. Therefore, we use the number of franchised and company-owned outlets as indicator for coordination economies of scale.

Outlet size: Existing empirical evidence shows that the tendency toward vertical integration rises with the size of the outlets. The size is measured by the average size of sales (Martin 1988; Lafontaine 1992).

Age of the franchise system: The number of years the company has been in franchising is used to appreciate the franchisor's experience. We expect the percentage of company-owned units increases with organizational learning representing the ownership redirection effect (Dant et al. 1996; Dant et al. 1998).

5.2 Results

Table 1 and 2 present descriptive data for the sample. The measures of ownership rights (royalties, initial fees and the percentage of company-owned outlet) are presented in table 1: For our sample from the Austrian franchise sector the mean of royalties is 4.29% and of advertising fees is 1.28% (based on sales). More than 26.9% of the outlets are company-owned. The structure of decision rights is presented in table 2.

Table 1. Franchise Systems

	N	Minimum	Maximum	Mean	Standard Deviation
Advertising Fee (percent of sales)	67	0	9	1.28	1.7
Franchisee's Annual Training Days	76	0	70	8.63	9.68
Initial Training Days	78	0	200	23.53	35.88
Initial Fees (US$)	76	0	200000	11048	23233
Royalties	70	0	20	4.29	4.26
Age	75	1	30	7.04	5.67
Percentage of Company-Owned Outlets	79	0.63	87.5	26.96	22.77
Number of Outlets	82	1	400	30.32	59.49
Franchisee's Local Market Knowledge Advantage	71	1	5	3.87	1.27
Franchisee's Quality Control Advantage	70	1	5	2.78	1.39
Franchisee's Innovation Advantage	69	1	5	3.5	1.35
Franchisee's Administrative Capabilities Advantage	69	1	5	3.3	1.26

Table 2. Decision Rights in the Sample

	N	Minimum	Maximum	Mean	Standard Deviation
Procurement decision	81	1	7	3.94	2.3
Product decision	83	1	7	4.73	2.00
Accounting system decision	81	1	7	4.74	2.16
Resale price decision	83	1	7	4.88	2.14
Advertising decision	83	1	7	5.29	1.76
Employees' training decision	82	1	7	5.35	1.57
Investment decision	83	2	7	5.87	1.49
Financial decision	83	1	7	6.05	1.63
Recruiting decision	83	1	7	6.53	1.30

5.2.1 Decision Rights-Hypothesis

To test the hypothesis (H1) we carry out a regression analysis with the index of decision rights as independent variable. In the first step, we conducted a binary logistic regression analysis (Long 1997). We divided the franchise systems into two groups: More centralized systems are systems with a decision index between 3 and smaller than 5, and more decentralized systems are systems with an index between 5 and 7. Since only two out of 83 franchise systems realized a decision index smaller than 3, we deleted these systems from the data set. Hence the value of the dependent variable (DR) is 0 for more centralized systems and 1 for more decentralized systems. In the second step, we conducted an ordinal regression analysis. The explanatory variables refer to initial and annual training days (IDAY, ADAY), advertising fees (ADV), franchisee's knowledge advantages resulting from 'exploration' and 'exploitation' capabilities (LM1, LM2) and the number of outlets (OUT). We estimate the following regression equation:

$$DR = \alpha_o + \alpha_1 ADAY + \alpha_2 IDAY + \alpha_3 ADV + \alpha_4 LM1 + \alpha_5 LM2 + \alpha_6 IDAY*ADAY + \alpha_7 OUT + \varepsilon$$

Based on our property rights hypothesis, DR varies negatively with the training days (ADAY, IDAY) and advertising fees (ADV). IDAY*ADAY indicates that the negative relationship between annual training days and decision rights is lower, the more system-specific know how is transferred at the beginning of the contract period, and hence the higher the initial training days (IDAY) are. A high number of initial training days and a low number of annual training days may indicate that the franchisor's system-specific know-how is more contractible (less intangible), because a larger part of the system-specific know-how can be already

transferred to the franchisee at the beginning of the contract period. In addition, DR varies positively with the franchisee's more intangible assets (LM1) and negatively with the franchisee's more tangible knowledge assets (LM2). We use two specifications of franchisee's local market assets: One-item and two-item scales. In the case of one-item scale, LM1a refers to the innovation advantage and LM2a to the administrative capabilities advantage of the franchisee compared to the manager of a company-owned outlet. Under two-items scale, LM1b refers to the mean of innovation and local market knowledge advantage and LM2b to the mean of administrative capabilities and quality control advantage. The number of outlets is included as control variable: DR may vary negatively with the number of outlets (OUT) indicating that coordination economies of scale increase the tendency toward centralization.

Results of the binary logistic and ordinal regressions are provided in table 3 and 4. Under logistic regression, the fit of the models (MODEL 1, MODEL 2) was tested based on the log of the likelihood ratio. For model 1 the chi-square value of 42.53 [38.48] is significant at $p < 0.001$ thus rejecting the null hypothesis that the estimated coefficients are zero. The overall fit of the binary logistic regression model represented by a significant chi-square and its predictive ability point to the appropriateness of the set of variables in predicting the degree of centralization of franchising networks. In both models the coefficients of annual training days and advertising (ADAY and FEE) are significant and consistent with our property rights hypothesis. On the other hand, the coefficient of initial training days (IDAY) is not significant. The coefficient of IDAY*ADAY is slightly significant and consistent with the hypothesis. The result suggests if more system-specific know how is transferred at the beginning of the contract period, less system-specific know how must be transferred during the contract period resulting in less control by assigning a smaller fraction of residual decision rights to the franchisor. However, this result may be related to the used proxy variable (training) to measure the transfer of system-specific know how. In addition, the coefficients of the local market know-how (LM1, LM2) are significant under model 1. The coefficient of LM1 is positive indicating that the residual decision rights for the use of more intangible local market assets (innovation and local market knowledge) must be transferred to the franchisee; on the other hand, the coefficient of LM2 is negative indicating that more explicit (contractible) local market knowledge (administrative capabilities and/or quality control) can be more easily transferred to the franchisor, due to relatively lower knowledge transfer costs. Furthermore, under model 2 only LM1 is positive and slightly significant indicating that more intangible (non-contractible) local market assets (LM1) have a larger impact on the allocation of residual decision rights compared to the less intangible local market assets (LM2). Moreover, the coefficient of OUT is negative and significant indicating that coordination economies of scale increase the tendency toward centralization.

Table 3. Logistic Regression Results

Dependent Variable: Decision Rights (DR)	MODEL 1 Coefficients (LM1a, LM2a 1-item scale)[a]	MODEL 2 Coefficients (LM1b, LM2b 2-items scale)[b]
Intercept	2.705**	2.341**
	(1.088)	(0.996)
ADAY (Annual Training Days)	-6.903***	-7.24***
	(2.632)	(2.754)
IDAY (Initial Training Days)	1.759	0.443
	(3.095)	(3.056)
ADV (Advertising Fee)	-4.391***	-3.798***
	(1.664)	(1.4)
LM1 ('Exploration Capabilities')	2.172**	1.761*
	(0.981)	(0.962)
LM2 ('Exploitation Capabilities')	-1.772**	-0.754
	(0.84)	(0.694)
IDAY*ADAY	13.056*	13.539*
	(7.308)	(7.651)
OUT	-1.239**	-1.08**
	(0.594)	(0.523)
N = 50		
Model Chi-square	42.53	38.48
-2 Log likelihood	23. 87	27.91
Correct Classification %	92	86
Nagelkerke R Square	0.77	0.73

*** $p < 0.01$; **$p < 0.05$; $p^* < 0.1$; values in parentheses are standard errors.

[a]: One-item scale: LM1a: Innovation advantage
LM2a: Administrative capabilities advantage

[b]: Two-items scale: LM1b: Innovation and local market knowledge advantage
LM2b: Administrative capabilities and quality control advantage

Under ordinal regression, we get similar results (see table 4). However, Nagelkerke R Square decreased from 0.77 to 0.55 [0.73 to 0.49] showing a weaker fit of the model. Finally colinearity diagnosis was performed using correlations between the independent variables (see table 5). The correlations between initial training and annual training days as well as between initial training and advertising are relatively high ($r = 0.40$ and $r = 0.44$; $p < 0.01$). This is not surprising as these variables have been used as a measure of the franchisor's system-specific and brand name assets.

Table 4. Ordinal Regression Results

Dependent Variable: Decision Rights (DR)	MODEL 1	MODEL 2
	Coefficients (LM1a, LM2a 1-item scale) [a]	Coefficients (LM1b, LM2b 2-items scale) [b]
Threshold Constants	-6.572***	-6.328***
	(1.463)	(1.48)
	-4.607***	-4.308***
	(0.931)	(0.904)
	-0.849**	-0.748*
	(0.410)	(0.387)
	2.754***	2.552***
	(0.586)	(0.538)
ADAY (Annual Training Days)	-2.291***	-2.361***
	(0.58)	(0.583)
IDAY (Initial Training Days)	-0.308	-0.818
	(0.727)	(0.713)
ADV (Advertising Fee)	-0.904***	-0.914***
	(0.328)	(0.339)
LM1 (Exploration Capabilities Advantage)	0.814** (0.395)	0.668^{+} (0.411)
LM2 (Exploitation Capabilities Advantage)	-1.093*** (0.394)	-0.603^{+} (0.378)
IDAY*ADAY	3.461**	4.231**
	(1.709)	(1.78)
OUT	-0.797**	-0.714**
	(0.311)	(0.3)
Model Chi-square	35.47	30.09
-2 Log likelihood	87.06	92.45
Nagelkerke R Square	0.55	0.49
	N = 50	N = 50

*** $p < 0.01$; **$p < 0.05$; $p^{*} < 0.1$; $p^{+} < 0.12$; values in parentheses are standard errors.

[a]: One-item scale: LM1a: Innovation advantage
LM2a: Administrative capabilities advantage

[b]: Two-items scale: LM1b: Innovation and local market knowledge advantage
LM2b: Administrative capabilities and quality control advantage

Table 5. Correlations of the Variables in the Logistic and Ordinal Regression

	ADAY	ADV	IDAY	OUT	LM1a	LM2a	LM1b	LM2b	DR
ADAY	1.000								
ADV	.445	1.000							
IDAY	.402	.080	1.000						
OUT	-.018	.070	-.239	1.000					
LM1a	-.201	-.080	.061	-.221	1.000				
LM2a	-.035	-.039	.064	-.207	.526	1.000			
LM1b	-.124	.051	.089	-.155	.827	.443	1.000		
LM2b	-.140	-.137	.020	-.186	.679	.757	.555	1.000	
DR	-.014	-.235	-.307	-.165	-.069	-.078	.022	-.077	1.000

5.2.2 Ownership Rights Hypotheses

To test the ownership rights hypotheses (H2, H3) we employ ordinary least squares and two-stage least squares regression analysis. The ownership variables are royalties (ROY) and the percentage of company-owned outlets (PCO). The choice of ROY may depend on the choice of the PCO, and other factors, such as decision rights, age, initial fees and sales volume. The simultaneous equation model hypothesizes that (1) the percent of company-owned outlets (PCO) influences the royalty rate (ROY), (2) the royalty rate affects the PCO, and (3) several antecedents affect both variables. The model includes residual decision rights (DR), outlet size (SALE) and initial fees (FEE) as antecedents of the royalty decision. Likewise, DR, outlet size (SALE), and age of the franchise system (AGE, AGE^2) are used as predictors of the PCO. Therefore, DR and SALE are common to both decisions. On the other hand, FEE is unique to the royalty decision, and AGE and AGE^2 are unique to the PCO-decision. In order to ensure that the equations in the systems are identified, each equation must exclude at least one of the exogenous variables. As a result, the empirical model is characterized by the following simultaneous equations:

$$\begin{pmatrix} ROY \\ PCO \end{pmatrix} = \begin{pmatrix} 0 & \beta_1 \\ \beta_2 & 0 \end{pmatrix} \cdot \begin{pmatrix} ROY \\ PCO \end{pmatrix} + \begin{pmatrix} \gamma_1 & \gamma_2 & \gamma_3 & 0 & 0 \\ 0 & \gamma_4 & \gamma_5 & \gamma_6 & \gamma_7 \end{pmatrix} \cdot \begin{pmatrix} FEE \\ DR \\ SALE \\ AGE \\ AGE^2 \end{pmatrix} + \begin{pmatrix} \varepsilon_1 \\ \varepsilon_2 \end{pmatrix}$$

Using this system of equations, we empirically investigate the interaction effect between royalties and the percentage of company-owned outlets. Support for substitutability exists if ROY negatively affects the percentage of company-owned outlets and PCO negatively affects the royalty rate. In addition, ROY decreases with decentralization of decision-making (DR). Furthermore, the property rights view of residual income rights suggest a positive correlation between initial fees (FEE) and royalties (ROY), because higher system-specific know how requires more intangible investments of the franchisor during the contract period to maintain a certain brand name value (Windsperger 2001). SALE has a positive impact on ROY indicating that higher SALE-values represent a higher brand name value that leads to higher investments by the franchisor during the contract period, and hence requires a higher royalty rate to maintain the franchisor's investment incentive. The second equation relates to the ownership variable PCO. The PCO decreases with decentralization of decision-making (DR). AGE represents the ownership redirection effect, due the franchisor's acquisition of outlet-specific knowledge during organizational life cycle (Dant et al. 1996; Windsperger, Dant 2006). Another explanation is the reputation effect of established franchise system for potential franchisees. In order to attract franchisees, the franchisor may maintain some company-owned outlets with the major role of signalling the value of the brand name assets in the early period of the franchise system (Gallini and Lutz 1992). This may explain a lower percentage of company-owned outlets in the latter period of the organizational life cycle. If the knowledge acquisition effect dominates the signalling effect, PCO increases with AGE. In addition, we include the outlet size (SALE) as explanatory variable. SALE has a positive impact on PCO indicating that, due to coordination economies of scale, higher sales lead to a higher percent of company-owned outlets.

Table 6 presents the correlations of the variables used in the simultaneous equation system. To estimate the system of equations, we employ OLS and two-stage least squares (2SLS) (Wooldrige 2002). 2SLS estimators yield consistent parameter estimates when equation systems are simultaneous. Table 7 and 8 report the results of the OLS and 2SLS-regression analysis for the ownership variables. Model fit is acceptable with R square values varying between 0.22 and 0.33. ROY-equation: The coefficient of DR is highly significant and consistent with the property rights hypothesis. In addition, the coefficient of PCO supports the property rights view of the allocation of company-owned outlets. Furthermore, the cooefficient of initial fees and outlet size are consistent with the hypothesis but not significant. PCO-equation: The coefficient of residual decision rights (DR) is highly significant and consistent with our property rights hypothesis. An increase in residual decision rights of the franchisee leads to a lower proportion of company-owned outlets. Moreover, the coefficient of ROY shows that the impact of royalties upon the PCO is negative and highly significant. Furthermore, the coefficient of outlet size is positive and slightly significant under OLS, and the age of the franchise system is not significant. Finally, we examine the substitutability hypothesis between royalties and PCO. Negative coefficients for ROY and PCO, re-

spectively, support a substitute relationship between royalties and the percentage of company-owned outlets. We find that increases in royalties are associated with a lower percentage of company-owned outlets and that increases in the PCO are associated with lower royalty rates.

Table 6. Correlations of the Variables Used in the 2SLS Regression

	AGE	SALE	DR	FEE	ROY	PCO
AGE	1.000					
SALE	.205	1.000				
DR	.243	-.099	1.000			
FEE	-.125	-.289	-.096	1.000		
ROY	-.097	.164	-.228	.233	1.000	
PCO	-.219	-.067	-.211	-.166	-.032	1.000

Table 7. OLS Regression Results

Dependent Variables: ROY and PCO	ROY	PCO
Intercept	19.907*	24.23
	(10.93)	(37.5)
ROY (Royalties)		-1.222**
		(0.55)
PCO (Percentage of Company-owned Outlets)	-9.31E-02*** (0.032)	
FEE (Initial Fees)	1.593E-06	
	(0.000)	
DR (Decision Rights)	-2.616***	-10.94***
	(0.679)	(3.11)
SALE (Outlet Size)	7.384E-0	4.1*
	(0.679)	(2.314)
AGE (Age of Franchise System)		0.777 (1.378)
AGE^2		-5.866E-02
		(0.049)
F	4.65	4.44
R Square	0.28	0.33
	N = 51	N = 53

*** $p < 0.01$; ** $p < 0.05$; *$p < 0.1$; values in parentheses are standard errors.

Table 8. 2SLS Regression Results

Dependent Variables: ROY and PCO	ROY	PCO
Intercept	25.15**	53.86
	(12.1)	(48.19)
ROY		-3.64**
		(1.39)
PCO	-0.186**	
	(0.088)	
FEE (Initial Fees)	2.029E-06	
	(1.898E-06)	
DR (Decision Rights)	-3.181***	-14.41***
	(0.881)	(4.13)
SALE (Outlet Size)	0.068	4.07
	(0.72)	(2.811)
AGE (Age of Franchise System)		-1.14
		(1.69)
AGE^2		-0.072
		(0.06)
F	3.35	3.75
Pseudo R Square	0.22	0.29
	N = 50	N = 50

*** $p < 0.01$; ** $p < 0.05$; *$p < 0.1$; values in parentheses are standard errors.

6 Discussion and Conclusions

In this paper we have developed and tested a property rights model of the governance structure of the franchising firm. In recent years this perspective has been adopted to explain different contractual provisions in franchising. But this research did not explain the governance structure of the franchising firm as an institutional entity consisting of residual decision and residual income rights. We filled this gap by showing that residual decision rights are allocated according to the distribution of intangible knowledge assets (local market and system-specific assets), and the residual income or ownership rights are assigned to those who have a large fraction of residual decision rights that create a large part of the residual income stream. This result is compatible with the view that residual decision rights and ownership rights are complements in the organizational architecture of the firm (e.g. Brickley et al. 2003; Nagar 2002). Since ownership rights are diluted in the franchising network, establishing company-owned outlets may mitigate the disin-

centive effect for the franchisor. Therefore, company-owned outlets serve as a substitute for the franchisor's diluted residual income rights.

The results obtained from the survey presented above seem to provide support to the proposed property rights hypotheses. First, the results suggest that if the system-specific know-how and the brand name assets are very important for the creation of residual surplus, the franchising network is more centralized. Second, the results of the regression models also confirm the hypothesis that more intangible 'explorative' local market assets of the franchisee increase the tendency toward decentralization and more tangible 'exploitative' local market assets decrease the tendency toward decentralization of the network. This is consistent with Jensen and Meckling's view, that co-location of decision rights with knowledge can be achieved by transferring less intangible local knowledge to the person who has the decision rights (i.e. to the franchisor) and by transferring residual decision rights to the person who has more intangible local market knowledge assets (i.e. to the franchisee). That means that decision rights tend to remain in the franchisor's headquarter when the costs of transferring knowledge to the franchisor is low, and decision rights tend to be delegated to the franchisee when the local outlets primarily produce knowledge that is costly to transfer to the franchisor. If we compare the results of MODEL 1 and MODEL 2 under logistic and ordinal regressions, we can see that the significance of the coefficients of LM1 and LM2 is lower under two-items measures than under one-item measures for intangible local market assets. There is at least one possible explanation for this weaker support: The content of the constructs 'exploration' and 'exploitation' capabilities may be better represented by one-item compared to two-items scale because, even with modest error term correlations between items and without inappropriate respondent behaviour in the case of multi-item measures, the incremental information from each additional item is extremely small (Drolet and Morrison 2001). Third, the results of OLS and 2SLS regression models consistently show that royalties and the percentage of company-owned outlets are substitutes, and residual decision rights and ownership rights are complements.

Our empirical study has some limitations: This has to do with the use of percepetual instruments to measure the franchisee's local market assets. In our study the influence of the franchisee's local market assets on the allocation of residual decision rights depends on measures based on the franchisors' opinion. In future research the operationalization of franchisee's intangible local market assets should be improved by using other proxies or – if possible - collecting data from franchisees. Furthermore, future research has to investigate the relationship between the allocation of residual decision and ownership rights and the efficiency of the franchise systems. Our property rights view suggests a higher performance under complementarity of residual decision and ownership rights, as well as under substitutability of royalties and the proportion of company-owned outlets.

If we compare our results with other studies two main differences exist: First, previous studies do not investigate the structure of decision rights as well as the

relationship between residual decision and ownership rights in franchising network. Second, empirical studies do not find a negative relation between royalties and the proportion of company-owned outlets (e.g. Shane 1998; Penard et al. 2003). Finally, we turn to some more general remarks and relate our paper to the literature on the theory of the firm, especially the new property rights theory (Grossman and Hart 1986; Hart and Moore 1990; Hart 1995; Baker et al. 2003). In the Grossman/Hart/Moore approach the owner of the asset is always able to exercise efficient control, due to the absence of uncertainty (Hart 1990). Hence this property rights approach cannot solve the division-of-knowledge problem (Langlois 2002a), because it assumes that decisions are contractible (Baker et al. 2003; Gibbons 2004), and the person who has the ownership rights automatically has the residual rights of control. Under uncertainty, however, the person who has the ownership rights need not have the residual decision rights that maximize the residual income. For instance, this could be the case when the franchisee's local knowledge and hence his residual decision rights are very important for the creation of residual income stream, but at the same time the franchisee may not fully use his local market knowledge to maximize the ex post surplus because he obtains only a small fraction of ownership rights. Consequently, our view is that assets characteristics (tangible/intangible) determine the allocation of decision rights, and asset ownership must be co-located with the structure of residual decision rights. This reasoning is consistent with the modularity theory of the firm (Langlois 2002a) that tries to answer the question which modularisation of the firm organization will yield the best system decomposition. By applying our property rights view, the degree of modularisation can be operationalized by the structure of decision and ownership rights.

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Appendix: Measures of Variables

Royalties (ROY): Franchisee's royalties as percentage of sales (including advertising)

Percentage of Company-owned Outlets (PCO):

Company-owned outlets*100/(company-owned + franchised outlets)

Initial Training Days (IDAY): Number of the franchisee's training days before opening franchised outlets

Annual Training Days (ADAY): Number of franchisee's annual training days

Fees (FEE): Initial fees

Advertising Fee (ADV): Franchisee's payment of advertising fees (as percentage of sales)

Franchisee's Knowledge Assets (LM1, LM2):

LM1 ('Exploration Capabilities): Franchisee's know-how advantage compared to the manager of a franchisor-owned outlet evaluated by the franchisor concerning

1. Innovation
2. Local market knowledge

(no advantage 1 – 5 very large advantage)

LM2 ('Exploitation Capabilities'): Franchisee's know-how advantage compared to the manager of a franchisor-owned outlet evaluated by the franchisor concerning

1. Quality control
2. Administrative capabilities

(no advantage 1 – 5 very large advantage)

Number of Outlets (OUT): Number of franchised and company-owned outlets

Outlet Size (SALE): Natural log of the average size of outlet sales

Years in Franchising (AGE)

Decision Index (DR) (Mean):

To what extent are the following decisions made by the franchisee?

Procurement decision, product decision, accounting system decision, resale price decision, advertising decision, employees' training decision, investment and financial decision, recruiting decision
(no extent 1 – 7 to a very large extent)

Governance Inseparability in Franchising: Multi-case Study in France and Brazil

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Abstract. The literature on franchising relies largely on the analysis of the transaction between franchisor and franchisees, sometimes also including company-owned outlets in the same investigation. This paper argues that the appropriate design of franchise contracts depends not only on the features of the transaction between franchisor and franchisees, but also on other transactions undertaken by the franchisor, particularly in upstream contracts, a hypothesis known as 'governance inseparability'. Moreover, certain institutional environment features that affect the choice of governance mechanisms in the supply chain may indirectly influence the design of franchise contracts. In order to examine this hypothesis, this paper presents a discrete structural analysis of 21 case-studies of food franchises in France and Brazil. The cases compare franchise chains in each country that share similar business features – e.g. McDonalds' operations in France and Brazil – in an attempt to control variables related to product and franchisors' strategies. The main findings are that: a) firms choose a portfolio of governance mechanisms to govern their set of transactions; b) upstream and downstream governance mechanisms are complementary; and c) quality regulation and competition policy restrain upstream governance mechanisms, having an indirect effect on the design of the franchise contracts.

Keywords. Governance inseparability, plural forms, franchising

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1 Introduction

The literature on franchising relies largely on the analysis of the transaction between franchisor and franchisees, sometimes also including company-owned outlets in the same investigation (Lafontaine 1992; Dant et al. 1996; Bai and Tao 2000; Penard et al. 2002, Windsperger 2004). This paper argues that the appropriate design of franchise contracts depends not only on the features of the transaction between franchisor and franchisees, but also on other transactions undertaken by the franchisor, particularly in upstream contracts, a hypothesis known as 'governance inseparability'. Inasmuch as the choice of a governance mode may be constrained by the governance choice in other ongoing transactions, the appropriate design of governance mechanisms should take into account the complete set of transactions undertaken by a firm (Argyres and Liebeskind 1999). Moreover, certain institutional environment features that affect the choice of governance mechanisms in the supply chain may indirectly influence the design of franchise contracts. In order to examine this hypothesis, this paper presents a discrete structural analysis of 21 case studies of food franchises in France and Brazil[3]. The cases compare franchise chains in each country that share similar business features – e.g. McDonalds' operations in France and Brazil – in an attempt to control variables related to product and franchisor strategies.

The paper is structured as follows. Section 2 presents the main argument of governance inseparability and its effect on the franchising literature. The third section comprises the results of the analysis of the 21 case-studies. First this section explores the effect of the risk of brand name loss on the choice of a portfolio of governance mechanisms. Then it describes the existence of plural forms in the transaction between the franchisor and its outlets and how they are complementary to upstream governance mechanisms. Finally, it looks at the effect of institutional variables on the choice of a portfolio of governance mechanisms. The last section summarizes the main results and suggests directions for future research.

2 Governance Inseparability and Plural Forms

There are several private arrangements to govern transaction hazards. The literature on Transaction Costs Economics (TCE), since Williamson (1985), has provided a model that, given the characteristics of a particular transaction, predicts the adopted governance structure. Moreover, transaction dimensions (asset specificity, frequency and uncertainty) are to some extent observable, thereby allowing empirical tests of important TCE propositions.

[3] The case studies comprise the following food sectors: fast food, grills, coffee shops, sweets and chocolates.

The argument initially presented by Williamson (1985) – and maintained in subsequent works (Williamson 1991 and 1996) – matches transactions dimensions to the choice of a singular governance structure (e.g. market, hybrid or hierarchy), which is arguably the most efficient among the set of possible structures in mitigating transactions costs. However, there is empirical evidence that existing governance arrangements influence the organizational choice of newer transactions (Argyres and Liebeskind 2002). Inasmuch as governance decisions of each transaction seem to be related to each other, the choice of a particular governance structure can not be analyzed in isolation, a proposition known in the literature as governance inseparability.

Williamson (1985) was already aware of the gains from taking into consideration the whole set of transactions in the analysis of governance structures. In his words, TCE "normally examines each trading nexus separately. Albeit useful for displaying core features of each contract, interdependencies among a series of contracts may be missed or undervalued as a consequence. Greater attention to the multilateral ramifications of contract is sometimes needed" (Williamson 1985, 393).

A more general argument recommends that the choice of a governance structure for a given transaction should be inseparable from all other transactions the firm takes part in. The main argument in the literature is that governance inseparability arises because the existence of several contractual commitments with other parties restricts the decision rights about governance choice (Argyres and Liebeskind 1999). These commitments constrain future governance choices because they may impede switching to a superior form of governance mechanism if the firm is already engaged in other governance structures in a similar transaction with other parties; and they may obliterate governance differentiation since the firm is constrained to use the existing type of governance mechanism in other transactions. In a more recent paper Argyres and Liebeskind (2002) identified a case of constraint on governance differentiation in the biotechnology industry.

Inasmuch as past choices restrain present options, both constraints on governance switching and on governance differentiation make history relevant for the organizational strategies. This case of path dependence differs from the one based on increasing returns (Arthur 1989), for which the timing alters the performance of a governance structure because of gains from, for instance, learning and trust. Since past choices influence present and future decisions, existing governance mechanisms should be taken into account when deciding how to govern a newer transaction.

As a consequence, the importance of past choices makes governance decisions inseparable. However, this is not the only reason why governance inseparability exists. The choice of governance structures for the various transactions undertaken by a firm may be interdependent if there is some synergy between complementary mechanisms of governance. This idea apparently contradicts the original insight of Coase (1937), for whom different coordination mechanisms – in his initial proposition, restricted to market and firm – were alternative ways to govern a given transaction. Even though this insight remains one of the main foundations of TCE, gov-

ernance inseparability also reveals that, besides being alternatives, governance structures may also be complementary. For instance, upstream contracts designed to reduce variability of input quality may attenuate moral hazard effects in the transaction between franchisor and franchisees.

The literature on franchising offers some cases where governance structures are complementary and, as a consequence, the choice of governance mechanisms should be inseparable. For example, Gallini and Lutz (1992) show that company-owned outlets signal franchisor relevant characteristics, i.e., vertical integration is complementary to franchising contracts. The literature on tapered vertical integration is also based on the notion of some complementarities between hierarchy and other governance structures. For instance, Azevedo (1996) suggests that tapered vertical integration may be adopted to improve bargaining position in a hybrid governance structure. Michael (2000) proposes a similar argument, in which tapered integration permits the acquisition of information about the subsequent production stage[4], with consequences on bargaining.

What are the consequences of assuming governance inseparability in franchising? The prolific literature on franchising focuses on the transaction between franchisor and franchisees, sometimes incorporating company-owned outlets in the analysis[5]. Nevertheless if franchising is subject to governance inseparability, other governance mechanisms may have an effect on either the design of a franchising contract or the decision not to franchise at all. As a consequence, upstream governance structures employed by a franchisor – such as vertical integration on the production of the inputs required by outlets – are missing variables in several analyses about the determinants of franchising contracts. This may explain why different franchise chains govern similar transactions with different governance structures (different contract design or different proportion of company-owned outlets), provided that they have distinct upstream governance arrangements.

3 Governance Inseparability in French and Brazilian Franchising

This section consists of a comparative analysis of food franchise chains in France and Brazil. In the French market, this paper analyzes the following cases: French Grill Courtepaille, La Boucherie (both grills), Jeff de Bruges (chocolates) and Comtesse du Barry (specialized in *foie gras*, a classic product of French cuisine). The cases also included operations in the French market of Segafredo Zanetti, an

[4] Riordan (1990) emphasized this role of vertical integration, when he defined it as a change in the information structure.

[5] Ozanne and Hunt 1971; Caves and Murphy 1976; Rubin 1978; Mathewson and Winter 1985; Bradach and Eccles 1989; Gallini and Lutz 1992; Lafontaine 1992; Klein 1995; Dant et al. 1996; Dnes 1996; Bradach 1997; Bai and Tao 2000 and 2000a; Azevedo and Silva 2001; Lafontaine and Shaw 2001; Penard et al. 2002; Windsperger 2004.

Italian group of coffee shops, and Quick, a Belgian fast food franchise chain. In Brazil, four originally Brazilian coffee shop chains were analyzed (Fran's Café, Café Pelé, Café do Ponto (recently acquired by SaraLee) and Casa do Pão de Queijo) in addition to the Brazilian franchises Habib's, China in Box, Vivenda do Camarão (all fast food businesses), as well as Bon Grillê (grills), Kopenhagen (fine sweets & chocolates) and Amor aos Pedaços (sweets & chocolates). The data set also included the Brazilian operations of the American The Nutty Bavarian (sweets & chocolates), Dunkin'Donuts (coffee & donuts) and Arby's (fast food). Finally the American McDonald's (fast food) was compared in both France and Brazil. In short, the comparative analysis includes 7 cases in France and 14 in Brazil, McDonald's being studied in both countries.

Companies were selected based on brand name value (according to Aaker (1991) measured by their stability and experience before franchising, experience in franchising (year franchising started) and geographic dispersion). Pairs of food franchise chains were selected from the same business in each country, McDonald's operations in both France and Brazil being the most extreme case, in which the same company is compared in different institutional environments. Data collection was based on semi-structured interviews (Yin 1989) with chain managers using the same questionnaire that addressed issues such as growth and procurement strategies[6]. Interviews took place at company headquarters in France and Brazil between 1998 and 2002. In order to gain a deeper understanding of the cases, the environment, official reports and general media documents were also analyzed. This multi-case study therefore uses mainly information from franchisors and not franchisees. Interviews with suppliers and franchisees would be interesting in order to check information from company reports as well to better detect non-reported conflicts. The comparative analysis of franchise chains in different countries, while not common, is necessary when addressing the effect of variables of the institutional environment on the choice of governance mechanisms. Institutional variables, such as competition policy and food quality regulation, may have an indirect effect on the choice of franchising, by restricting the choice of upstream governance. As a result, in order to investigate this hypothesis it is necessary to contrast franchise chains that operate in different institutional environments, the case of franchising in France and Brazil, key-players in international franchising (see Table 1).

3.1 A Portfolio of Mechanisms to Mitigate the Risk of Brand Name Loss

Several franchise chain strategies – from the way they organize their transactions to innovation efforts – are designed to deal with the trade-off between the costs of shirking and the risk of brand name loss (provision of services below quality

[6] The original questionnaires are available with authors.

standards by franchisees[7]). The higher the value of keeping quality standards, the more likely the efforts the franchise chains will direct to overcome franchisees' incentives to reduce quality. This is nothing new. However, this proposition has strong implications on organizational choice, in both downstream (franchisor-franchisees) and upstream (supply chain) transactions. Here lies our major point. The same variable (e.g. brand name value) determines the organizational choice of different transactions, with different attributes. The organizational solution in upstream transactions has an effect on the choice of franchise contracts, which is evidence of governance inseparability.

In almost all the 21 cases, when the value of maintaining product uniformity is higher, the franchise chains tend to adopt organizational strategies that prevent free-riding behavior among franchisees. The pay-off of maintaining quality standards depends on both the brand name value and the consumer's sensitivity to variations in

Table 1. Main players of international franchising in number of franchisors

Country	Franchisors 2004	Ranking 2004	Franchisors 2001	Ranking 2001	Evolution 2004/2001
China	1.900	1º.	600	10º.	+ 9 steps
USA	1.500	2º.	2.150	1º.	- 1 steps
Japan	1.100	3º.	1.048	5 º.	+ 3 steps
Brazil	900	4º.	1.010	6º.	+ 2 steps
Canada	850	5º.	1.370	2º.	- 3 steps
France	765	6º.	650	9º.	+ 3 steps
Germany	760	7º.	1.125	4º.	- 3 steps
Philippines	750	8º.	508	ND	- steps
Australia	720	9º.	747	7º.	- 2 steps
UK	695	10º.	665	8º.	- 2 steps
South Korea	NA	NA	1.320	3º.	NA

Based on information from both European Franchise Federation (EFF) and World Franchise Council (WFC) announced by Franchising French Federation (FFF) at <http://www.franchise-fff.com/index.php>. Concerning December/31 of each year. NA: Data Not Available.

[7] See for instance Bai and Tao 2000, Lafontaine and Raynaud 2002, Azevedo and Silva 2003, Bercovitz 2004, Windsperger et al. 2004.

the attributes of products. In Barzel's (1982) seminal argument, brand name has a value because it transmits information about attributes of products that saves consumers' measurement costs. As a consequence, maintaining product uniformity is worthwhile as it preserves the brand name's ability to transmit information.

How sensitive consumers are to the variation in product attributes is also important. In Barzel's terms, if consumers are quite sensitive (have low measurement costs of product attributes), the seller must incur higher measurement costs to prevent consumers from collecting information themselves. As a consequence, chains will direct efforts to increase quality control, for instance, reducing franchisees incentives to reduce quality.

Among all the cases, Comtesse du Barry and Segafredo, in Europe, and Vivenda do Camarão, and Kopenhagen, in Brazil, are examples franchises with reasonably sensitive consumers. For cultural reasons, French customers are capable of identifying the slightest variance in the *foie gras* (Comtesse du Barry) and coffee (Segafredo), among other products. Brazilian consumers of shrimps with cream at Vivenda do Camarão are also able to distinguish changes in the skimmed milk suppliers and shrimp characteristics. Finally, Kopenhagen sells varieties of chocolates as gifts for special occasions, comparable to jewels. Small variations in product attributes also jeopardize its image as a present for Valentine's Day or an engagement proposal for instance. In all these cases franchisors vertically integrate the production of inputs directly related to their brand names, such as *foie gras*, (Comtesse du Barry), coffee beans (Segafredo in Europe), shrimps (Vivenda do Camarão) and chocolates (Kopenhagen). Furthermore these franchise chains have a higher proportion of company-owned outlets – therefore franchisee incentive to reduce quality is lower –, and certain innovative methods are used to limit tasks carried out by the franchisee that might affect the quality of products.

In general, there are three ways to avoid the costs related to the misuse of brand name by franchisees: reducing the variability of the inputs supplied to chain outlets, by means of governance structures such as hierarchy and hybrid modes in upstream transactions; providing better incentives for outlet managers to meet quality standards, by means of governance mechanisms in the transaction between franchisor and franchisees (e.g. higher proportion of company-owned outlets or safeguards in the franchise contract); and eliminating tasks performed by franchisees that affect attributes of products, which may be achieved by means of innovation (e.g. ready to use products which do not require any hidden action by franchisees) and organizational strategies (such as central kitchens and pre-cooked meals, which may be interpreted as vertical integration of some tasks originally performed in the outlets).

A comparative analysis of coffee shops in Brazil and France is illustrative. Although Brazil is one of the main coffee producers in the world, Brazilian consumers have not developed the ability to distinguish and appreciate different coffee flavors (Farina and Saes 1997), unlike French consumers. After decades of pricing and trading regulation, Brazilian consumers have been used to low quality coffee

and acquired drinking habits that attenuate the effect of coffee flavors[8]. After deregulation in the early 1990's, some companies tried to explore all sorts of differentiation strategies, but those based on coffee flavors did not pay off and were discontinued (Farina and Saes 1997).

In order to analyze the effect of varying consumer sensitivity to product attributes, four Brazilian coffee shops (Café do Ponto (owned by SaraLee), Café Pelé, Fran's Café and Casa do Pão de Queijo) are compared to Segafredo Zanetti operations in Brazil and Europe. In all Brazilian chains of coffee shops, the franchisor has control over the supply of roasted coffee by means of long term contracts (Café Pelé and Casa do Pão de Queijo), exclusive dealing contract (Fran's Café) and vertical integration (Café do Ponto). Apart from control over roasting and grinding, the coffee chains in Brazil use the spot market to buy coffee beans with negligible control on quality. Therefore given the low product sensitivity of Brazilian consumers to coffee flavors, which depends primarily on the quality of the coffee beans, chains do not exert control on the coffee bean market.

The comparison with Segafredo Zanetti operations in Brazil and Europe is striking. Segafredo Zanetti coffee shops have exclusivity on the distribution of the high-end coffee blend (Nero) of the company, which also sells other blends to restaurants and hotels. In order to strictly control the quality of coffee beans and roasting, Segafredo vertically integrates coffee production on its own farm in Brazil and roasting at its plant in Bologna, Italy, which supplies all coffee shops in Europe. Although Segafredo sells some blends in the Brazilian market, the coffee beans that grow in Brazil are sent to European coffee shops, which is additional evidence that consumer sensitivity is an important variable to understand organizational strategies.

The cases clearly indicate that the higher the value of keeping quality standards, the more likely the chances are for franchise chains to adopt a governance mechanism that provides more control on all pertinent transactions. It is also observed that, for a given level of keeping quality standards, the use of governance structures that provide more control on the supply chain (upstream coordination) reduces the need of incentives and control on the transaction between franchisor and outlet managers (franchisees or managers of company-owned outlets). This is basically the idea of governance inseparability, which is further investigated in subsequent sections.

3.2 Plural Forms in Franchise Contracts

Plural forms are an important subject in franchising literature. The co-existence of franchised and company-owned outlets in the same chain is a well-known fact

[8] It is noteworthy that Brazilians tend to consume hotter and sweeter coffee, which reduces the consumer's ability to distinguish different flavors. After 15 years of deregulation, the market for premium coffee has been slowly increasing, together with the sensitivity of consumers to slight changes in coffee bean attributes.

which has received much deserved attention from researchers[9]. Nevertheless, organizational forms in franchising are more diverse than suggested by the literature[10]. Indeed, in addition to hierarchy form (company-owned outlets) the franchise chains under analysis use three different franchise contracts in the sample: conventional franchising; partial franchising; and management contract. In conventional franchising, the franchisor transfers to the franchisee the totality of initial investments of franchised units. In addition, the franchisee pays the franchisor a lump-sum franchise fee as well as a proportion of sales in royalties. In contrast, in partial franchising, the initial investment of franchised units is shared between the parties. The franchisor hands on the expenses incurred on the building (purchase/rent), retaining the residual rights over it, whereas franchisees are responsible for investment in equipment, furniture and staff. In addition to the regular taxes, the franchisee transfers to the franchisor an additional proportion of sales as a rental fee. Finally, in the management contract the franchisor typically covers the totality of initial investment in the unit, transferring only the management of the franchised unit to the franchisee. In exchange, the franchisee pays the franchisor an administration fee as well as royalties and a rental fee, and not necessarily a franchise fee. In this format, the franchisee resembles a manager of company-owned outlet with variable revenues according to unit performance. Table 2 shows the main features and consequences of each governance structure identified.

An important difference among the various observed governance structures is their role as a solution for capital restrictions (Ozanne and Hunt 1971; Caves and Murphy 1976; Mendelsohn 1985; Coughlan et al. 2001). Whereas in the conventional contract the franchisee is responsible for all investment, in the management contract he or she receives similar high-power incentives without immobilizing his/her own capital. The very existence of this type of franchising contract (management contract) is evidence that raising capital is not the only reason to franchise, although it remains important to explain the adoption of conventional franchising.

Another important distinction is the role of each governance structure in providing incentives against shirking and reducing quality standards. Inasmuch as franchisees retain part of the residual claims over variations on unit sales, conventional, partial and management contracts transfer higher incentives to work harder to the franchisee than to managers of company-owned outlets. Nevertheless, the three types of franchising differ in their incentive intensity. Conventional franchising allocates a higher proportion of the residual claims to franchisee, in the form of return on his or her investment, which implies higher incentives not to shirk.

On the other hand, franchise contracts are more vulnerable to the moral hazard on quality provision than company-owned outlets. These risks are comparatively higher under conventional franchising, unless, in addition to the payment scheme of this format, the franchisee incurs higher specific investment in the outlet

[9] See Bradach and Eccles 1989, Dant et al. 1996, Bradach 1997, Bai and Tao 2000 and 2000a, Azevedo and Silva 2001, Lafontaine and Shaw 2001, Pénard et al. 2002.

[10] One exception is Bercovitz (2004) who also analyzes the choice of multi-unit franchising.

(Azevedo and Silva 2001). By guaranteeing to the franchisor control over the building location, the partial and management contracts prevent former franchisees from using the same location for a similar activity, free-riding on reputations towards consumers. In order to attenuate these risks, conventional franchising uses safeguards such as clauses of ex-post non-competition.

Despite this, it is noteworthy that in Brazil franchise chains do not fully exploit the diversity of franchise contracts, as observed in France/Europe. Whereas in Brazil company-owned outlets are often combined with a unique franchise contract (in general conventional franchising), in France franchise chains employ a more complex portfolio of governance structures in downstream transactions (Table 3). This paper claims that the difference between the two countries is due to jurisdictional uncertainty. This is detailed in section 3.4, which deals with the effect of the institutional environment on the choice of governance.

Table 2. Features of portfolio of governance mechanisms identified in French and Brazilian franchising

Govern. Mechanism	Characteristics					Consequences of Governance Mechanism
	Investment	**Payments Scheme**	**Outlet Control**	**Residual Claim**	**Risk Sharing**	
Conventional	franchisee holds 100% of initial investments	franchise fee add royalties	franchisee	franchisee	higher risk to franchisee	higher gains in capital and human resources raising; and in the reduction of moral hazard on shirking
Partial	franchisee and franchisor share initial investments	ditto add rent fee	franchisor	franchisee (lower than in conventional contract)	some risk transferred to franchisor	higher franchisee motivation in work as hard as desired by franchisor, reducing monitoring costs comparing to hierarchy form
Management Contract	franchisor: 100% initial investments	ditto add Administration fee	Franchisor (franchisee resembles the manager of company-owned outlet)	transfer to franchisee (lower than partial contract)	risk shared between franchisor and franchisee	
Hierarchy (Company-Owned Outlet)		-	franchisor	-	higher risk to franchisor	comparative gains in the control of franchised brand name (reducing moral hazards on quality)

Table 3. Governance mechanism according to chain market

Company	Market	Governance Mechanism				Business
		Conv.	Partial	Manag.	Hierarchy	
Grill Courtepaille	in all markets	•	NA	NA	•	Grills
Jeff de Bruges	in all markets	•	NA	NA	•	Sweets & Chocolates
Comtesse du Barry	target markets	•	NA	•	•	Fine Products
	other markets	•	NA	NA	•	
La Boucherie	target markets	•	NA	•	•	Grills
	other markets	•	NA	NA	•	
Segafredo Zanetti	target markets	•	NA	•	•	Coffee Shop
	other markets	•	NA	NA	•	
Quick	target markets	NA	•	•	•	
	other markets	•	NA	NA	•	
McDonald's	global standard	NA	•	•	•	
	Brazil	NA	•	NA	•	
Arby's	global standard	NA	•	•	•	Fast Food
	Brazil	•	NA	NA	•	
China in Box	Brazil	•	NA	NA	•	
Vivenda do Camarão	Brazil	•	NA	NA	•	
Habib's	Brazil	•	NA	NA	•	
Bon Grillê	Brazil	•	NA	NA	•	Grills
Dunkin'Donuts	global standard	NA	•	•	•	
	Brazil	•	NA	NA	•	Sweets & Chocolates
Amor aos Pedaços	Brazil	•	NA	NA	•	
The Nutty Bavarian	Brazil	•	NA	NA	•	
Kopenhagen	Brazil	•	NA	NA	•	Fine Sweets & Chocolates
Fran's Café	Brazil	•	NA	NA	•	
Café do Ponto	Brazil	•	NA	NA	•	
Café Pelé	Brazil	•	NA	NA	•	Coffee Shop
Casa do Pão de Queijo	Brazil	•	NA	NA	•	

NA: Data Not Available, Conv: Conventional, Manag: Management.

3.3 Governance Inseparability in Upstream and Downstream Transactions

As shown in the previous section, franchise chains use plural organizational forms in transactions with their outlets. Not only do plural forms exist and are more diverse than the well known dichotomy of company-owned and franchised outlets, but also the choice of a governance structure for one transaction seems to be related to the choice for the others. Our claim is that organizational choices are interdependent because governance structures are complementary. In addition to governance inseparability of franchisor-franchisee transactions, this section focuses on the role of upstream transactions, exploring the complementarities between upstream and downstream governance structures.

The Comtesse du Barry (*foie gras*) and Jeff de Bruges (chocolates) case studies are illustrative. When compared with other chains, Comtesse du Barry and Jeff de Bruges have the remarkable feature of supplying their units with ready-to-eat products[11], i.e., they vertically integrate processing activities that could otherwise be performed by either suppliers or the outlet itself. By means of this organizational strategy, the company has greater control on quality standards at the outlet level, inasmuch as franchisees do not process or manipulate the final product. The use of governance structures that provide more control on the supply chain allows Comtesse du Barry and Jeff de Bruges to reduce the need for control on downstream transactions. Indeed, Comtesse du Barry and Jeff de Bruges also employ licensing contracts as an alternative mode of governance of outlets. The licencee, under an independent brand name, has full autonomy regarding the entire business format itself. Among all other cases, only Dunkin'Donuts employs a similar marketing channel strategy, combining licensing with company-owned outlets and franchised units. However, their licensees must be located near franchised or company-owned units, which are in charge of the supply of ready-to-eat products to licensees. In such arrangement, Dunkin'Donuts also mitigates the risk of brand name loss.

The comparative analysis of Grill Courtepaille and La Boucherie (both specialized in grills) provides further evidence of governance inseparability in upstream and downstream governances. Although they operate in the same market and share similar business features, Grill Courtepaille and La Boucherie have a quite different proportion of company-owned outlets, 79.2% versus 17.1% respectively in 2004. The reason for this remarkable difference in the level of control on the transactions with their outlets is the governance structure used in the supply chain. Grill Courtepaille relies on a branch of Accor Group (Accor Reste) for the selection of suppliers[12], but it does not maintain the decision rights over the choice of suppliers. Even in the case of inputs directly related to their brand name (meat,

[11] For those products directly related to their brand name: *foie gras* and chocolates.

[12] Accor Group is the main shareholder of Grill Courtepaille. In fact, Grill Courtepaille restaurants tend to be strategically situated physically close to hotels from Accor Group. Some suppliers of Grill Courtepaille are shared with Accor hotel chain.

bread, vegetables, cheese and wine), the franchisees have autonomy to deal directly with local suppliers to explore regional specificities. On the other hand, one of the main competitors of Grill Courtepaille, the also French La Boucherie, has vertically integrated the supply of its restaurants, particularly regarding its key-products (meat, wine and other inputs related to La Boucherie business format, such as equipment, fittings and marketing materials). Since 2000, Société CAVIAR (*Centre d'Affinage des Viandes de Restaurants*) is responsible for: selection, control and trading of product; traceability, hygiene and sanitary controls of raw-material; cut meat; and optimization of both distribution and service practices of La Boucherie restaurants. The control on the supply chain – greater in the La Boucherie case – explains why it does not exert the same level of control on outlets as Grill Courterpaille does.

3.4 Institutional Environment and its Effects on Franchise Contracts: A Case of Governance Inseparability

The comparative analysis of case studies of France and Brazil allows the investigation of the institutional environment effect on franchising contracts. In particularly, the focus is the institutional variables that have a direct effect on some franchisors' transactions and how they indirectly influence the organizational choice in the other transactions undertaken by the franchisor. This section details the following issues: a) jurisdictional uncertainty with regard to the enforcement of franchising contracts; b) transaction costs in the capital market and c) competition policy restrictions to vertical arrangements.

The acknowledged inefficiency of the Brazilian judiciary and the consequences of this on economic arrangements play an important role[13]. This feature of the Brazilian institutional environment has direct implications on the choice of governance structures, particularly on the choice of the various franchising contracts (conventional, partial and management) and the proportion of company-owned outlets. The comparative analysis of plural forms, mentioned in section 3.2, exemplifies this.

The Brazilian institutional environment may be the reason why international franchise chains do not adopt the same organizational strategies in Brazil as they do in their countries of origin. Different from what is observed in other markets, Dunkin'Donuts, The Nutty Bavarian and Arby's do not make use of the diversity of franchise contracts in Brazil, using only the dual structure of conventional franchising and vertical integration. An exception is McDonald's, which retains control over building location, as it does in its operations all over the world.

[13] Pinheiro (2005), in an extensive survey, observed that Brazilian jurisdictional decisions are too lengthy, unpredictable and biased towards the weaker party. Arida et al. (2005) argue that the inexistence of a long term credit market in Brazil is caused by the poor guarantees the judicial system offers creditors. Zylbersztajn and Nadali (2003) assert that the location decisions in the agribusiness sector are sensitive to the way the regional courts judge contractual litigations between agricultural producers and food processors. Such inefficiencies are the consequence of the delays and uncertainties regarding court rulings.

McDonald's position of maintaining its international strategy in Brazil has generated conflicts between the company and its Brazilian franchisees. A crisis began in 1996 when the company started a strategy of accelerated growth in the Brazilian market, which resulted in a decline of unit sales. Since 1999, when Brazilian currency was devalued, the conflict has worsened. Franchisees who had debts indexed to the dollar took the company to court, resulting in a series of onerous lawsuits in Brazil. By increasing the costs of franchising in Brazil, the conflicts between McDonald's and its franchisees have probably been the main causes for changing the company organizational strategy towards a higher level of vertical integration, increasing the proportion of company-owned outlets (Figure 1).

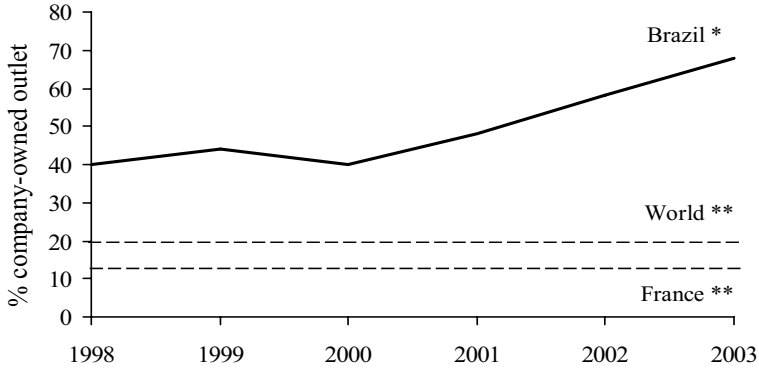


Figure 1. Evolution of the proportion of company-owned outlets employed by McDonald's in Brazil, France and in the world-wide.

*Forecast of stability for the next years = about 70%. ** McDonald's estimate. Based on primary data in addition to (2003) and Gazeta Mercantil (2003).

In short, the jurisdictional uncertainty that affects the costs of franchising has led to a higher level of vertical integration. It could be argued that this is not a case of governance inseparability, inasmuch as in each transaction the higher cost of contracting increases the likelihood of vertical integration. Nevertheless, it is noteworthy that the use of franchising contracts that provide more control to franchisors (partial franchising and management contract) is widespread in France and not observed in Brazil. The higher proportion of company-owned outlets in Brazil reduces the need for control on franchising contracts.

The second argument is transaction costs in the capital market. Brazil has one of the highest interest rates in the world[14]. Macroeconomic foundations are certainly part of the history that explains this anomaly in the Brazilian capital market, but there are institutional variables that contribute to the high transaction costs in this

[14] In 2005 real interest rates were about 13% a year for fixed income securities.

market. Arida et al. (2005) observed that long term credit market has not developed in Brazil because court rulings are biased towards debtors. As a consequence, creditors do not use long term contracts, which are more likely to be litigious. In contrast, the French capital market is far more accessible. This is another possible explanation of why in France all types of franchising contracts can be found, as opposed to Brazil, in which the conventional franchising is the absolute dominant form. An imperfection in the transaction between franchisors and capital lenders imposes capital restrictions that may be solved by the use of a franchising contract (conventional) that attracts capital from franchisees. In France, the role of franchising as an alternative to raise capital is attenuated because franchisors have better access to the capital market. This is further evidence of governance inseparability in franchising[15].

Finally, competition policy may constrain the choice of governance mechanisms in upstream transactions, having an indirect effect on the design of the franchise contracts. For instance, in France/Europe companies that have more than 30%[16] of the market are not allowed to impose vertical restraints to franchised outlets, such as exclusive suppliers or vertical integration of input production. It is expected that those restrictions have an effect on the need for control on downstream transactions, in order to preserve the brand name value.

However, the evidence of McDonald's in France, a company subject to competition policy restriction, suggests, at first sight, that the above proposition is actually false. Inasmuch as McDonald's cannot control the variability of inputs, it was expected that it would use a higher proportion of company-owned outlets, which is a way to prevent franchisees' incentives to reduce quality. Contrary to these expectations, the proportion of company-owned outlets that McDonald's holds in France is historically significantly lower than the number observed in Brazil, even before court rulings raised the costs of franchising (Figure 1).

A more detailed look at the franchising contracts and quality regulation in France provides a possible explanation for this. The variability of input quality, particularly of agricultural products, is lower in France than in Brazil due to more effective French quality regulation. The lower the variability of inputs, the less necessary it is to exert control on the supply chain. In addition, as already mentioned, franchising contracts in France are more diverse, including forms – such as partial franchising and management contract – that provide better incentives for franchisees to keep up with quality standards. In short, in comparison with Brazil,

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[15] The first two arguments explain basically the same empirical regularity: variety of franchising contracts in France and predominance of conventional franchising in Brazil. As a consequence, we can not separate both effects, but they are both plausible arguments based on the idea of governance inseparability.

[16] European Competition Policy, according to the Regiment of Exemption 2790, of 1990, establishes that retailing vertical arrangements, among then franchising contracts, are subject to the following clause: companies with a market share that exceeds 30% are not allowed to require exclusive suppliers.

McDonald's in France relies more intensely on franchising by means of types of contracts that provide more control to the franchisor.

4 Concluding Remarks

There is little dispute that firms choose a portfolio of governance mechanisms in order to deal with the whole set of transactions they are engaged in. Less well researched, however, are the consequences of not taking governance inseparability into account when explaining firm boundaries and contracts that govern particular transactions. The literature on governance inseparability proposes that former transactions constrain the choice of present governance mechanisms (Argyres and Liebeskind 1999). In addition governance choice is interdependent because different governance mechanisms employed by the same firm may be complementary.

Franchising is an interesting case where the appropriate design of a governance structure of a particular transaction depends on other governance arrangements. In a set of 21 case-studies there is evidence that franchisors choose a portfolio of governance mechanisms to govern this set of transactions; upstream and downstream governance mechanisms are complementary, making the governance decision of each transaction inseparable from the others; and quality regulation and competition policy restrain upstream governance mechanisms, having an indirect effect on the design of the franchise contracts. The latter finding is particularly relevant to the case of franchise chains that venture into foreign markets, being subject to different institutional environments. If competition policy, for instance, imposes some sort of restriction to vertical restraints, such as an exclusive supplier to outlets, the franchisor will not be able to reduce quality variation of inputs and therefore face greater risk of loss of brand name value. Under pressure to mitigate hazards related to final product variability, the franchisor may be willing to adopt franchising contracts that provide better incentives for franchisees to respect specified quality standards.

If this proposition is correct, existing governance mechanisms should be taken into account in any analysis of the determinants of governance choice. As franchising literature largely relies on the transaction of the franchisor and his/her outlets (franchised or company-owned), with no reference to upstream governance mechanisms, these studies may have omitted variables. One important implication of governance inseparability in empirical studies into franchising is that information about the whole set of transactions undertaken by a franchisor should be taken into account. However, how the absence of these variables affects current results of the literature is not clear. In fact the huge empirical support of the basic TCE argument (Klein 2004) suggests that omitting existing governance mechanisms does not have a strong effect on the predictive power of the theory.

Moreover, governance inseparability has important management implications. While the governance mechanism employed in the supply chain may have an indirect effect on the design of franchise contracts, the need for coordination among

different management areas is greater. For instance, areas that traditionally are kept apart, such as procurement and the contract design with franchised and company-owned outlets, may have to coordinate their actions more often. Another important implication is the need to expand the variables that affect strategic management. For example, changes in quality regulation that reduce the variability of input quality may indirectly affect the optimal design of a franchise contract and monitoring activities undertaken by the franchisor.

For future research, it would be desirable to gather information on the whole set of franchisors' transactions to empirically test the effect of upstream governance on downstream franchising contracts. Furthermore, a cross-country analysis in order to capture the effects of institutional environment variability is also recommended.

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Entrepreneurial Autonomy, Incentives, and Relational Governance in Franchise Chains

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Abstract. Franchisee autonomy fosters system-wide adaptability and outlet-owners' motivation but also raises the costs from agency problems present in franchisee-franchisor dyads. Advancing upon the understanding of agency issues involved in franchising, we test the argument that chains counterbalance the loss in control inherent to autonomy with relational governance mechanisms. The empirical results provided strong support for this presumption. In addition and most notably, we found that relational governance becomes more important the weaker agents' incentives are aligned with the interests of the entire network. The moderating effects of five franchisee characteristics influencing goal congruencies were considered: multi-unit ownership, age of the relationship, geographic distance, economic success, and the level of perceived intra-chain competition. Implications for chain management are provided.

Keywords. Franchising, relational governance, decision-making, incentives

1 Introduction

Franchising is an attractive organizational form to pursue growth strategies (Shane 1996). It does not only permit realizing economies of scale through system-wide standardization in various functional areas such as marketing, purchasing, and product development, but relative to company operations, franchising additionally allows profiting from the expertise of independent entrepreneurs to continuously adapt to local markets (Bradach 1997; Sorenson and Sørensen 2001). For their specific knowledge to be leveraged and local market adaptation to occur, franchisees should be granted autonomy in various operational aspects of the business.

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Leeway for independent action is furthermore important to the prospect of the whole chain since it upholds franchisees' satisfaction in the relationship and hence their motivation to deliver performance (Schul, Little, and Pride 1985; Dant and Gundlach 1999). That is, franchisees often choose the franchise option in order to become their own boss and to run a business according to own decisions while profiting from a proven business concept (Peterson and Dant 1990; Elango and Fried 1997). Placing too narrow restraints on outlets' operations increases the risk of disappointing hopes for entrepreneurial behavior.

Notwithstanding the above benefits, increasing levels of autonomy equally raise the potential costs from agency problems present in any franchisee-franchisor dyad (for example, Pizanti and Lerner 2003). In consequence, autonomous decision-making by downstream stores may or may not lead to increased performance from the franchisor's perspective. Success eventually hinges on chains' ability to counterbalance the loss in control inherent to autonomy with mechanisms that achieve goal congruence between the exchange partners. Only under conditions of common economic interests between the parties can the full economic potential of decentralized dyadic decision-making be realized.

A growing body of literature analyzes the importance of social interactions in the governance of channel structures. In particular, the functionality of trust and relational norms – or more generally, the role of relational governance – in coordinating vertical relationships has been subject to scholarly attention (Palay 1984; Kaufmann and Stern 1988; Noordewier, John, and Nevin 1990; Poppo and Zenger 2002). In this paper, we empirically explore the reliance on relational governance as a control mode to attenuate the agency problems resulting from franchisee autonomy. Most notably, we hypothesize that relational governance becomes more important to accompany autonomy the weaker franchisees' structural incentives are aligned with the franchisor. Hence, individual franchisee-franchisor dyads from different networks are the units of analysis. We focus on the moderating role of five franchisee characteristics which have previously been proposed to affect agency issues in the dyad: (1) multi-unit ownership, (2) age of the franchisee-franchisor relationship, (3) geographic distance between the outlet and the company's head office, (4) franchisees' past economic success, and (5) the level of perceived intra-chain competition.

Our study contributes to the literature in the following ways. First, although past work has investigated appropriate functional areas for independent action by franchisees (Kaufmann and Eroglu 1999), little is known about the governance of behavior within these limits. Relative to Kaufmann and Eroglu's conceptual study and earlier empirical literature which has been concerned with the question of 'who makes decisions' in chains (Arruñada, Garicano, and Vázquez 2001; Windsperger 2004), this paper shifts the research focus to the question of 'how to assure that decision rights are not abused'. Our interest therefore is to investigate empirically how companies assure that franchisees use their autonomy in

Pareto-improving ways such that it leads to better performance at the outlet while having a non-negative impact on the viability of the system.

Second, by incorporating franchisee characteristics such as single- vs. multi-unit ownership in the analysis, this study extends and corroborates earlier research which found incentive effects of these characteristics to be important for channel management (for example, Dant and Nasr 1998). From a practical point of view, asking how a chain can achieve cooperation with outlet owners of differing expectations and orientations is crucial (Grünhagen and Mittelstaedt 2005). By focusing on the specific characteristics of each outlet, we advance the theoretical understanding of agency issues in franchising. This knowledge might also provide conceptual guidance to managers in the field when structuring decision rights and control mechanisms.

The paper is organized as follows. First, we define autonomy, elaborate on its various structural sources and discuss the agency issues related to it. Second, the construct of relational governance is introduced and hypotheses about the main and moderated relationships between autonomy and relational governance are derived. Third, an empirical test of our hypotheses is reported. Fourth, we discuss our findings and provide implications for practitioners. We conclude in the last section.

2 Franchisee Autonomy

2.1 Definition and Structural Sources of Autonomy

Autonomy can be conceived of as the extent to which a party, here a franchisee, is unconstrained to independently make decisions (Feldstead 1991; Strutton, Pelton, and Lumpkin 1995; Dant and Gundlach 1999). Independence pertains to the practical fulfilment of a task as far as its content is concerned; more precisely, it relates to the search for different solutions, to the choice of one feasible alternative and to subsequent actions. Autonomy entails leeway not only on how but also as to which task is performed – for example, the latitude of franchised outlets to select a new project (Lewin-Salomons 1998). Thus, we refer to autonomy as the scope for 'entrepreneurial freedom' franchisees possess to operate affiliated units according to own decisions.

Basically, four structural sources of entrepreneurial autonomy can be identified: (1) the allocation of contractual rights, (2) contractual incompleteness, (3) control costs as well as limited monitoring capacities, and (4) direct acceptance of deviant franchisee behavior by the franchisor. Since formal, legal documents such as contracts and operating handbooks are most often uncustomized within a network, the first two factors above cannot explain differences in autonomy across individual franchisee-entrepreneurs of a same system – which is the focus of this paper. Yet, since control costs may differ among units (Lafontaine and Slade 1997), differential scopes for decentralized operations within any chain can emerge. Outlets

which are more costly to monitor should then experience higher levels of autonomy compared to stores which are less expensive to monitor and therefore controlled intensely. The degree of autonomy across a focal network's franchisees can as well fall apart for the company could accept deviations from contractually regulated business procedures if beneficial outcomes for the whole channel are expected. Conversely, due to power asymmetries between the principal and the agents, chains can enforce certain restrictions at (potentially opportunistic) stores even if these constraints are not formally incorporated in the contract or the handbooks. Lewin-Salomons (1998) argued and provided some anecdotal evidence that this kind of informal allocation of decision rights is a central source of franchisees' operational realm. Thus, "in a single franchising chain the level of control and autonomy exercised may differ from one franchisee to the next" (Pizanti and Lerner 2003, 138).

2.2 Agency Issues Related to Autonomy

Agency theory is concerned with the resolution of trading hazards inherent to "a contract under which one or more persons (principals) engage another person (the agent) to perform some service on their behalf" (Jensen and Meckling 1976, 308). In distribution, the organizational form of franchising circumvents an important agency problem which would arise between a system's head office and an employee managing an outlet (Rubin 1978). In particular, franchisees' residual claim on the profits of their unit (net of royalty payments) induces greater effort than is provided by a company employee who receives mainly a fixed salary and who therefore seeks to minimize his costs of effort. Notwithstanding, residual claims create another goal conflict, namely incentives to free-ride on the chain's brand name (Lafontaine and Raynaud 2002). Examples of free-riding include underinvestment in advertising, failure to comply with production standards, and insufficient supervision of staff. Franchisees cheating on investments in the brand name by lowering the quality of output reduce their costs and thereby augment profits since they are unlikely to loose (short-term) sales if other units follow through with obligations. The reason is that consumers credit the goodwill they attach to the trade name even to stores which fail to deliver promised quality. Michael (2000) provided empirical evidence that the horizontal externality problem related to a shared trademark combined with the residual claim status of franchisees have a negative impact on overall system quality. He reported that the quality experienced by consumers was negatively related to the incidence of franchising within any network. The extent of autonomy allocated to franchised dealers determines the potential costs resulting from the goal conflicts described above (see, generally, Jensen and Meckling 1992) since decentralized decisions involve a control loss for the franchisor. In the following, we describe how relational forms of governance curb agency conflicts by aligning the economic interests of the dyadic partners.

3 Hypotheses

3.1 Controlling Franchisees: Relational Forms of Governance

We define relational forms of governance, also referred to as informal institutions (North 1990), as norms of behavior and unwritten codes of conduct which safeguard exchanges against potential conflicts. Norms, in turn, are defined as expectations of behavior shared by dyadic partners (Heide and John 1992). They emerge from the social embeddedness of a contractual relationship (Macneil 1980; Granovetter 1985; Ring and Van de Ven 1994; Jones, Hesterley, and Borgati 1997) and/or are conditioned by the prospect of realizing a higher transaction value in the future than would be possible without such norms (Baker, Gibbons, and Murphy 2002). While formal governance arrangements such as explicit contract terms are in general discrete (that is, they either exist or are absent), relational forms of governance are continuous since they differ in degree rather than in kind (Zenger, Lazzarini, and Poppo 2001). An intensification of the specific norms considered below conforms to more pronounced relational content in a business liaison (Macneil 1980). The major reason why relational governance is suitable to control the behavior of dispersed franchisees is that control in the day-to-day operations is guaranteed by means of persuasion – not authority (that is contracts). Bradach (1997, 288) cited one franchise consultant – franchisor personnel charged with managing the contact to outlets – who described that "relationships are crucial and when they deteriorate it becomes extremely frustrating to try to get the company's goals across".

Most studies on relational governance in distribution channels have drawn from the atmospheric dimensions initially proposed by Macneil (1980), though none considered all of the elements simultaneously (see, for a review, Ivens and Blois 2004). Concerns about the consequences of incompleteness in the consideration of codes of conduct can be partially accommodated. Noordewier, John, and Nevin (1990, 84) noted that individual norms tend to be highly related to one another and might thus be part of a "single higher order" relational syndrome. Our relational governance conceptualization contains elements alluding to the following norms: (1) the harmonization of conflict norm, defined as the extent to which a franchisee and a franchisor find mutually satisfying, non-opportunistic solutions to conflicts (Macneil 1980; Mohr and Spekman 1994; Brown, Dev, and Lee 2000); (2) the intensity of cooperation, referring to the extent to which exchange parties carry out their respective tasks in a coordinated and cooperative way, thereby acknowledging that outcomes from joint effort exceed those achievable through self-interest seeking and opportunism (Anderson and Narus 1990; Heide and John 1990; Lambe, Spekman, and Hunt 2000); and (3) the prevalence of trust also acting as a mechanism against the risk of opportunistic action (Bradach and Eccles 1989; Granovetter 1985; Bromiley and Cummings 1995; Zaheer and Venkatraman 1995; Zaheer, McEvily, and Perrone 1998). The construct of relational governance encompasses these three aspects.

The observation that theoretically derived predictions about opportunistic action in franchising translate into empirical facts (for example, Michael 2000) suggests

that relational norms (but also formal controls) cannot perfectly enforce cooperative behavior. Nevertheless, the above cited studies also indicate that relational norms do define acceptable limits to behavior, taking the preservation of the relationship as a constraint, and thus constitute a partial safeguard against the exploitive abuse of decision rights (see, also, Heide and John 1992; Gundlach, Achrol, and Mentzer 1995). We therefore argue that in a cross-section of franchisees within chains, relational governance becomes more intense where stores possess more autonomy and thus more room for opportunistic behavior. Formally:

> H1: The extent of franchisee entrepreneurial autonomy is positively related to the intensity of relational governance in any dyad.

3.2 The Moderating Role of Franchisee Incentive Characteristics

Thus far, we implicitly assumed that franchise networks accompany autonomous decision-making at the outlets with equal relational governance intensity irrespectively of franchisees' incentives to engage in opportunistic behavior. However, past research revealed idiosyncratic incentive characteristics across stores of a same chain (Gal-Or 1995; Lafontaine and Slade 1997). In addition, we ignored any costs being brought about by relational control. Yet, the setup of dense ties with focal partners consumes time and resources (Larson 1992; Heide 1994; Ring and Van de Ven 1994; Poppo and Zenger 2002). It is a planned activity and may not only include costs of trust building but also those of failing to reach minimal levels of trust (Das and Teng 1998). Thus, investments necessary to shape exchange norms constitute sunk certification costs (Mills and Ungson 2003) to be borne primarily by the systems' headquarters. As a consequence, franchisors should commit resources to the development of intense linkages only in the presence of significant incentives of franchisees to deviate from the company's interests. In sum, franchisees with incentive structures more closely aligned to those of the company should be awarded entrepreneurial autonomy with less counterbalancing through relational forms of governance. Formally:

> H2: The degree of structural incentive congruence in a dyad will moderate the relationship between the extent of franchisee autonomy and relational governance intensity: specifically, the positive relationship between autonomy and relational governance will be less strong the closer franchisees' incentives are aligned with the franchisor.

In the following, five incentive characteristics are considered with regard to their impact on the link between autonomy and relational governance: multi-unit ownership, age of the franchisee-franchisor relationship, geographic distance between a franchisee's outlet and the chain's head office, past franchisee success, and the level of intra-brand competition faced by a unit.

3.2.1 Multi-unit Ownership

Multi-unit ownership describes a situation where one franchisee owns, operates or controls more than one outlet (Kaufmann and Dant 1996). While some multi-unit franchisees start a single unit in the beginning and acquire the rights to operate additional outlets over time, referred to as sequential expansion, others are entitled to run multiple units from the outset, referred to as master franchising (Kaufmann and Kim 1995).

Empirical evidence suggests that franchise companies must not worry about opportunistic abuses of autonomy by multi-unit agents (Dant and Gundlach 1999). This is because the interests of multi-unit owners are closely aligned with those of the entire network. Most notably, incentives to free-ride on the common brand name are weakly pronounced, even in nonrepeat customer industries (Dant and Nasr 1998). By cheating on quality, multi-unit partners would jeopardize their own sales to a greater extent than would their single-unit counterparts. In other words, multi-unit ownership internalizes a large fraction of specific investments in the trade name. Furthermore, due to higher stakes in question, head offices are less likely to terminate or non-renew contracts of multi-unit than those of single-unit franchisees. Therefore, the former should project their channel membership farther into the future than the latter. Consequently, foregoing investments in quality would impair future sales of franchisees owning multiple units to a relatively large degree (Dant and Nasr 1998).

Dant and Gundlach (1999, 45) summarized the argument as follows: when allocated decision-making authority, multi-unit franchisees "are not likely to exploit such opportunities to deviate from the prescribed procedures because they can directly appreciate the rationale for discipline and standardization within a franchising context from the franchisor's perspective". Anticipating this incentive structure, the marginal benefits from investments in relational quality with multi-unit owners should be smaller for every given level of autonomy compared to the benefits derived from investments in good dealings with single-unit operators.

> H2a: The number of outlets owned by a franchisee will moderate the relationship between the extent of autonomy and relational governance intensity: specifically, the positive relationship between autonomy and relational governance will be less strong among multi-unit than among single-unit franchisees.

3.2.2 Age of the Franchisee-Franchisor Relationship

Age of the relationship defines the time period since a franchisee started operating an outlet. Relationship length has been argued to positively influence the expectations on both sides of the dyad about the continuity of the exchange in the future (Dant and Nasr 1998). Franchisees' incentives to invest in system-specific assets, thereby refraining from free-riding, increase as the future time horizon over which such investments can be amortized extends. Also, potential pecuniary advantages

from opportunistic deviation that would accrue in the short-run are more likely to be evened out by the gains from cooperation the longer the discounting period.

From the perspective of the chain, the age of a relationship can also be interpreted as an indicator for past agent behavior, namely whether autonomy has been utilized constructively (see, generally, Eisenhardt 1989). Franchisors' unilateral discretion about periodical contractual renewal provides a bond to punish opportunism. Thus, the track record of franchised partners which have been part of the system over two or more contractual periods should certify their quality (Dant and Nasr 1998).

Besides the risk of opportunism, downstream decision-making independence can also damage a system's reputation due to a lack of knowledge about routines and procedures on behalf of inexperienced franchisee-entrepreneurs. In this sense, relational governance can be understood as a communication and cooperation mechanism amenable to assist the outlets as they gain in control over decisions. With the passage of time, the dispersed units acquire proficiency and specific knowledge about operations and assistance should become less important.

The preceding arguments support a negative relationship between relationship length and the need for shared behavioral norms. From the knowledge-based rationale above, however, one can also derive a positive relationship between age of the relationship and the severity of agency issues. Since, over time, franchisees gain in experience regarding specificities of local demand and efficient operating processes, they develop own beliefs about quality and behavioral standards and increasingly challenge the franchisor's authority (Knight 1986; Baucus, Baucus, and Human 1996). Their willingness to comply with imposed standards may decrease as a result, augmenting agency conflicts.

In sum, however, we feel that the motivation for franchisors investing less in relational governance at every level of autonomy when relationship length increases are more compelling and we therefore expect the following hypothesis to hold.

> H2b: Age of the franchisee-franchisor relationship will moderate the relationship between the extent of autonomy and relational governance intensity: specifically, the positive relationship between autonomy and relational governance will be less strong among older than among younger dyads.

3.2.3 Geographic Distance

Geographic distance denotes how far an outlet is physically remote from the franchisor's monitoring head office. Distance raises the level of behavioral uncertainty about the agent and widens the information gap in the dyad (Fladmoe-Lindquist 1996). This is because monitoring is costly. More precisely, the costs of sending a company representative to inspect a unit's operations (for example, cleanliness, product quality) increase in the number of kilometers between the system's head office and the outlet.

Monitoring costs are central to agency theory's prediction about the choice of vertical integration versus franchising. The argument assumes that managers of owned units have weak incentives to perform efficiently since a large fraction of their salary is fixed. Although financial performance of a store can be gauged by the company in each period, performance may not be attributable to either the outlet's manager or to other factors beyond his control, for example the general economic environment. Where behavior-based monitoring is difficult, the franchisor may, in consequence, franchise an outlet. Franchisees have higher incentives to perform since they claim the unit's residual profits. Brickley and Dark (1987) as well as Fladmoe-Lindquist and Jacque (1995) provided empirical evidence in line with the agency theoretic argument that physically removed outlets tend to be franchised whereas those in proximity to headquarters are company-owned. Monitoring costs thus have an important bearing on the organization of distribution channels.

The behavioral uncertainty associated with increased distance should amplify agency problems associated with a shift of decision rights from the franchisor to the outlets. Agrawal and Lal (1995) showed that monitoring costs negatively affect the frequency of inspections by the franchisor and the level of service provided by franchisees. Since behavior-based monitoring is costly, outcome-based controls may be a valuable substitute. However, electronic data transmission is often inadequate to communicate information that accurately reflects the outlet's operations (Fladmoe-Lindquist and Jacque 1995). In addition, franchisees seldom integrate their information systems with the head office (Bradach 1997). If relational governance is a mechanism to reduce information asymmetries and behavioral uncertainties, we would expect the relationship between autonomy and relational governance to be stronger for distant franchisees than for those partners located close to the network's head office.

> H2c: Geographic distance between a franchised outlet and the franchisor's monitoring head office will moderate the relationship between the extent of autonomy and relational governance intensity: specifically, the positive relationship between autonomy and relational governance will be stronger among distant franchisees than among those located closer to the monitoring head office.

3.2.4 Franchisee Success

Success pertains to franchisees' satisfaction with past economic performance relative to comparison levels (Anderson and Narus 1990). Drawing from power-dependence theory, Dwyer and Oh (1987) noted that because of their criticality for systems' access to growing markets, franchisee-entrepreneurs operating in munificent environments (that is, those who are generally successful) have power over the extent of control exercised by the principal. Conversely, poor performing outlets are more likely to actively seek centralized franchisor support (Peterson and Dant 1990). Indeed, empirical evidence indicates that munificence in local markets decreases bureaucratization (that is, formalization and centralization) thereby favoring down-

stream independent decision-making (Dwyer and Oh 1987). In a similar vein, it could be argued that networks' dependence on successful franchised stores also increases these agents' bargaining power in case of conflict; bargaining power which franchisees can exploit to their advantage and at the expense of the chain. This line of reasoning would suggest relatively strong requirements for relational exchange norms to accompany autonomy of successful franchisees.

Based on self-enforcement theory (Klein 1995), we alternatively submit that high levels of satisfaction with past performance reduce the risk of opportunism. Self-enforcement operates by leaving sufficient rents downstream such that the threat of termination of the relationship ensures franchisee compliance. Chains must observe performance at stores through monitoring and subjectively decide whether it conforms to the desired level. Specifically, in order for the implicit contract to be self-enforcing, franchisees' discounted extra gain from opportunistic behavior (before being terminated) must be smaller than the discounted rent stream that accrues from cooperation in the long run.[2] The higher a franchised outlet's economic potential the more important the returns foregone upon termination. At every given level of autonomy, opportunism should then be better controlled the higher a franchisee's performance. Therefore, we expect:

> H2d: Franchisee success will moderate the relationship between the extent of autonomy and relational governance intensity: specifically, the positive relationship between autonomy and relational governance will be less strong among franchisees which are more successful than among those which are less successful.

3.2.5 Competition

Intra-chain competition usually becomes more pronounced with continued system growth. Maturing franchisors seek to extract the full economic potential of already developed areas by increasing the number and thus geographic proximity of affiliated outlets (Stassen and Mittelstaedt 1995). The clustering of peer outlets amplifies horizontal externalities and fosters franchisees' incentives for free-riding. That is, multiple stores within the same geographic area reduce a focal franchisee's market size and thereby the fraction of returns from investments in reputation which can be internalized. By reducing a franchisee's market size and increasing price pressures, intra-chain competition also compromises the functioning of the self-enforcement mechanism (Klein and Murphy 1988). This mechanism, as outlined above, relies on the provision of an ongoing rent to franchisees to assure proper behavior. The level of these rents is, however, reduced by lower market size and product prices associated with increased competition. In consequence, realizing short-term gains from cheating becomes more attractive for outlet-owners. In sum, agency issues are reinforced by intra-chain competition. Accordingly, we expect:

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[2] Note that a franchisor can credibly promise the payment of rents to franchisees only if the franchising option is more attractive than using company-owned outlets.

H2e: The level of intra-chain competition perceived by a franchisee will moderate the relationship between the extent of autonomy and relational governance intensity: specifically, the positive relationship between autonomy and relational governance will be stronger among franchisees which perceive higher levels of competition than among those which perceive lower levels of competition.

4 Empirical Test

4.1 Sample

To test the hypotheses, we used cross-sectional data collected from a sample of franchisees operating in Germany. The data was gathered through mail surveys and for purposes of a broader research project on franchisee satisfaction during the years 1999 to 2003. A self-administered questionnaire (see Table A1) was sent to the whole population of franchised outlets within each of 11 different business-format franchise chains participating in the study. Franchisors provided the postal addresses of their partners to the researchers. Each mailing included the questionnaire, a cover letter describing the purposes of the study and guaranteeing anonymity to participants, as well as a postage-paid reply envelope.

The specific formulation of the Likert-type questionnaire items emerged from a qualitative-explorative pre-study involving franchisors, consultants, and franchisee focus groups. A total of four moderated focus groups gathered 15 franchisees from eight different chains. In the framework of these meetings, participants were given the opportunity to express important facets of the relationship to their franchisors. Balance and trust in the partnership were named central criteria regarding relationship quality.

In collaboration with the participating chains' management teams, channel members had been informed about the study in advance of the mailings to assure that, following the key informant approach, the owners of the outlets personally answered the questionnaire. Despite collaboration with the systems' head offices in conducting the survey, participation in the study remained voluntary. In order to enhance response rates, subjects were offered a copy of the survey results; no other incentives to participate in the study were provided.

In total, questionnaires were sent to 1050 franchisees. After reminder notices, the survey yielded an overall average (weighted) response rate of 21 percent (system specific response rates lay between 13.68 and 42.85 percent). Our final sample consisted of 208 observations. Table 1 provides a breakdown of the number of sampled units across chains. Based on the detailed classification scheme used by Lafontaine and Shaw (2001), each of the networks operated in a different industry sector. The population our sample draws from is defined as the entirety of franchisees from these sectors in Germany.

Table 1. Distribution of franchisees in the sample (across chains and sectors)

System	Sector	Number of franchisees in sample	System-specific response rates (in percent)	% of total number of franchisees across systems in sample
1	Retail: Food	17	24	8.17
2	Business services	5	20	2.40
3	Retail: Home furnishings	3	43	1.44
4	Retail: Pet food	21	32	10.10
5	Retail: Building materials	34	18	16.35
6	Retail: Computer equipment	18	30	8.65
7	Repair	10	19	4.81
8	Retail: Other	13	14	6.25
9	Eating places: Full service	5	19	2.40
10	Retail: Tobacco	13	16	6.25
11	Travel	69	18	33.18

The average chain was 13.87 years old, had 104.12 franchised outlets and an entry fee of about 19.000 €.

We tested for nonresponse biases by comparing the average sampled observation in each system with the average outlet-owner computed from the population of each chain along the dimensions age, gender, number of years in business, and multi-unit ownership. To obtain information on the characteristics of the populations, we contacted officials in the chains. For System 4 (10 percent of cases in our sample, see Table 1), we could not discuss our data with the chain's management because the network has dissolved since the survey was conducted. No evidence of obvious nonresponse biases emerged for the remaining systems.

4.2 Variables

4.2.1 Dependent Variable

Relational governance was operationalized using items alluding to the exchange dimensions identified in the theoretical section: harmonization of conflict, intensity of cooperation, and prevalence of trust (see Table A1 in the appendix for the exact wording). The questions relating to the harmonization of conflict norm (5a-5c) evaluated to which degree dyadic partners engaged in problem solving as opposed to cultivating disputes (see Dant and Schul 1992). Items 5d to 5f assessed

Table 2. Factor matrix for relational governance

1 factor extracted (Eigenvalue > 1); Kayser-Meyer-Olkin-criterion: 0.885; Bartlett's test of sphericity: $Chi^2 = 826.47$, df = 36, $p < 0.001$.		
Factor	Eigenvalue	% of var.
1	4.698	52.205
Factor matrix		Relational governance
5a)		0.652
5b)		0.765
5c)		0.785
5d)		0.804
5e)		0.696
5f)		0.635
5g)		0.808
5h)		0.752
5i)		0.577
Absolute values less than 0.3 were suppressed.		

the most important element of cooperative behavior, namely, the extent to which mutual interdependence was appreciated by the channel members in their respective business processes (see Anderson and Narus 1990). The trust specific items (5g-5i) tapped whether vulnerabilities on both sides were mutually exploited by the other, a central theme of trust research (see Bigley and Pearce 1998).

The 'syndrome' of relational governance was expected to encompass these partially overlapping norms. Results of a principal component factor analysis (see Table 2) revealed that the three dimensions were indeed part of a higher order construct. All of the items loaded highly on one factor (all factor loadings ≥ 0.577), suggesting that they were strongly associated with each other. We built a composite measure by summing and averaging – using equal weights – the scores of the individual items.

Reliability of the summated scale was assessed by Cronbach's alpha. The alpha value of 0.87 was well above the lower limit of acceptability, set at 0.60 for newly developed scales (Hair, Anderson, Tatham, and Black 1998). We also investigated item-to-total as well as inter-item correlations. The results confirmed sufficient reliability of the relational governance construct. Furthermore, we assessed (convergent) scale validity by inspecting the correlation between the summated scale and a single item capturing franchisees' overall satisfaction with the quality of the relationship to the provider of the business-format (exact wording: How satisfied are you overall with your relationship to the franchisor? 1-7; very unsatisfied-very satisfied). The strength of the bivariate correlation was substantial ($r = 0.773$, $p < 0.001$). Concerning validity, we caution that we relied on a single source key informant approach. John and Reve (1982) noted that sentiments variables, such as exchange norms, may fail to converge across respondents from the opposite sides

of a dyadic relationship. However, we claim that we measured relational governance on the 'right' side of the dyad (with franchisees), for relational governance only safeguards against conflict when the party which has room for opportunism (brought about by franchisee autonomy) perceives the above norms to be relevant for his behavior.

4.2.2 Independent Variables

Respondents assessed their perceived level of autonomy on four separate questionnaire items (see Table A1). These intended to capture two notions of autonomy frequently reappearing in the literature: 1) the leeway to make independent decisions and 2) quasi as a result, the extent to which a franchisee feels to be his own boss (for example, Schul, Little, and Pride 1985; Feldstead 1991). Questions 6a and 6b grasped to what extent franchisees perceived to be unconstrained when making decisions, referring to the first notion above. Items 6c and 6d measured, corresponding to the second notion, whether the franchised partners considered themselves as primarily executing directives, being employees, or rather managing their outlet according to own decisions, being entrepreneurs. Results of a principal component factor analysis (see Table 3) indicated the four items to load highly on one common factor (all factor loadings ≥ 0.645). The scores on the four items were summed and averaged – using equal weights.

Cronbach's alpha of reliability for the composite autonomy measure was 0.64. We further assured reliability through item-to-total and inter-item correlations. With all inter-item correlations except one (being $r = 0.29$) exceeding the threshold of 0.30 and all item-to-total correlations above 0.50 (the smallest correlation being 0.55), we felt confident about reliability of the scale.

We assume that franchisors are aware of the level of autonomy each franchisee disposes of. It could be argued that measuring franchisors' perceived levels of autonomy with regard to each individual outlet would have been more accurate. However, John and Reve's (1982) results accommodate this concern. They showed that perceptions on structural variables such as the degree of centralization of channel dyad decision-making converge across key informants from the different sides of a dyad.

Consistent with earlier literature (for example, Dant and Gundlach 1999), a nominal no/yes question, coded as a dummy variable (no = 0; yes = 1), was used to ascertain multi-unit ownership, that is, whether a franchisee operated one or more outlets (see Table A1).

Franchisees were asked to indicate the year in which they opened their outlet, from which we calculated the age of the franchisee-franchisor relationship. This measure is consistent with Dant and Nasr (1998).

Following Brickley and Dark (1987) as well as Minkler (1990), geographic distance was calculated as the number of kilometres (instead of miles) that lie in between a franchised outlet and the chain's head office. In the questionnaire, respondents specified the first two digits of their postal code. Although information

about the full postal code, comprising five digits, would have added precision to our calculations, only two digits were requested in order to guarantee anonymity. To calculate distance, we used a standard route planning software; introducing franchisees' two-digit postal code as the destination and the five-digit postal code of chains' headquarters as the starting point.[3]

Franchisee success, or the extent of satisfaction with past performance, was measured by four separate questionnaire items (see Table A1). The questions asked respondents to evaluate their recent performance relative to different comparison levels. Comparison levels included 1) alternative activities 2) average industry sales growth 3) own income expectations and 4) own sales objectives.

Anchoring success by reference to comparison levels is in line with Anderson and Narus (1990). The results of a principal component factor analysis (see Table 3) revealed the four items to load highly on one factor (all factor loadings ≥ 0.633). We built a scale which averaged – using equal weights – the sum of the scores on the four items. Cronbach's alpha of reliability was 0.83. Inspection of item-to-total correlations and inter-item correlations provided further support for the reliability of the scale. We verified convergent scale validity via the correlation between the summated scale and a single item assessing franchisees' overall satisfaction with performance (exact wording: How satisfied are you overall with your performance? 1-7; very unsatisfied-very satisfied). The correlation can be classified as substantial ($r = 0.713$, $p < 0.001$).

Table 3. Factor matrix for franchisee success and autonomy

2 factors extracted (Eigenvalues > 1); Kayser-Meyer-Olkin-criterion: 0.761; Bartlett's test of spherity: $Chi^2 = 556.42$, df = 28, $p < 0.001$.					
Factor	Eigenvalue	% of var.	cum. % of var.		
1	3.191	39.893	39.893		
2	1.660	20.747	60.640		
Factor matrix				Success	Autonomy
4a)				0.633	
4b)				0.855	
4c)				0.880	
4d)				0.850	
6a)					0.645
6b)					0.778
6c)					0.762
6d)					0.664
Absolute values less than 0.3 were suppressed.					

[3] A two-digit postal code covers a surface of approximately 6000 square kilometres. There are 99 different two-digit postal codes in Germany.

Our measure evaluated the intensity of competition between franchisees of the same chain, that is, intra-chain competition (see Table A1). Outlet owners were called upon to report whether the number of franchised outlets in the chain exceeded a reasonable size. In our context, a perceptual measure seemed more appropriate than an objective count of the number of outlets in the chain – as previously used by other researchers (for example, Arruñada, Garicano, and Vázquez 2001). First, a simple count does not capture the geographic dispersion of outlets and thus the level of intra-brand competition faced by each individual unit. Although our measure did not ask respondents to state whether the number of franchised outlets in their geographic area had exceeded a reasonable size, it is sensible to assume that answers were provided with this fact in mind. Second, actual free-riding behavior generally needs to be preceded by the perception of the potential to improve one's own performance at the expense of peer franchisees and/or company-outlets. We checked validity of this measure by correlating it with the number of sampled franchised outlets within each geographic area, as defined by the two-digit postal codes. This is a measure similar to Minkler's (1990) outlet density, calculated as the number of stores within a five mile radius. The correlation between our two measures amounted to only 0.19, but was significant at the 0.01 percent level. Given that we could only count franchisees which were included in the sample, we felt that the correlation with the perceptual measure indicated sufficient convergent validity.

4.2.3 Control Variables

In our empirical models, we did not need to control for contractual variables (for example, royalty rates) usually considered by agency theorists in the study of franchising (for example, Lafontaine 1992). This is because we focused on variance in autonomy across outlets of a same chain. As an empirical fact, franchisees within any system face homogenous contractual conditions. Variance in contractual terms across the 11 different chains in our sample was captured by 10 system dummy variables. We also included the variables which describe franchisees' incentive characteristics as.

4.3 Methods and Results

4.3.1 Descriptive Statistics

Table 4 shows descriptive statistics on the variables used in this study (only arithmetic means and standard deviations are reported).

Inspection of descriptive statistics on the dependent variable revealed that the average franchisee perceived high relational governance intensity in the past (mean = 5.35). With a minimum of 2.56 and a maximum of seven (s.d. = 1.06) the data showed a high range of scores. The observed variance across franchisees as

Table 4. Pearson correlation coefficients and descriptive statistics

Variable	mean	s.d.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
(1) System Dummy 1	0.08	0.27																
(2) System Dummy 2	0.02	0.15	-0.05															
(3) System Dummy 3	0.01	0.12	-0.04	-0.02														
(4) System Dummy 4	0.10	0.30	-0.10	-0.05	-0.04													
(5) System Dummy 5	0.16	0.37	-0.13	-0.07	-0.05	-0.15												
(6) System Dummy 6	0.09	0.28	-0.09	-0.05	-0.04	-0.10	-0.14*											
(7) System Dummy 7	0.05	0.21	-0.07	-0.04	-0.03	-0.08	-0.10	-0.07										
(8) System Dummy 8	0.06	0.24	-0.08	-0.04	-0.03	-0.09	-0.11	-0.08	-0.06									
(9) System Dummy 9	0.02	0.15	-0.05	-0.03	-0.02	-0.05	-0.07	-0.05	-0.04	-0.04								
(10) System Dummy 10	0.06	0.24	-0.08	-0.04	-0.03	-0.09	-0.11	-0.08	-0.06	-0.07	-0.04							
(11) Relational governance	5.35	1.06	0.29***	-0.02	0.08	0.36***	-0.04	-0.07	0.07	-0.02	-0.18*	0.09						
(12) Multi-unit ownership	0.23	0.42	0.01	-0.01	-0.07	-0.18**	0.38***	-0.09	-0.12	-0.09	-0.09	0.05	0.00					
(13) Age of the relationship	7.50	5.76	-0.11	-0.05	-0.02	-0.17*	0.66**	-0.06	0.01	-0.06	-0.01	-0.09	-0.03	0.36***				
(14) Geographic distance	309.74	206.77	-0.12	0.21**	-0.17*	-0.18*	0.06	0.11	-0.09	-0.07	0.08	-0.23**	-0.32***	0.02	0.05			
(15) Franchisee success	4.41	1.35	0.26***	-0.03	-0.04	0.31***	0.12	0.07	0.04	0.04	-0.14	0.01	0.51***	0.13	0.09	-0.12		
(16) Intra-chain competition	2.98	2.06	-0.14*	-0.08	-0.04	-0.18*	0.12	-0.06	-0.11	-0.08	0.03	0.11	-0.33***	0.08	0.09	0.04	-0.19**	
(17) Autonomy	5.45	0.70	0.23**	-0.04	0.04	0.28***	-0.04	0.01	0.05	-0.25***	-0.38***	0.10	0.55***	0.03	-0.08	-0.20**	0.37***	-0.25***

n = 208. Significance levels (two-tailed): *** p < 0.001; ** p < 0.01; * p < 0.05.

sured us that our measure captured 'true' relational facets. This observation is not trivial since, for instance, Dant and Schul (1992) found – reflecting structural conditions – virtually no variance on other atmospheric variables such as the degree of solidarity within any dyad.

Table 4 shows bivariate Pearson correlations between the variables. We found a positive and highly significant correlation ($r = 0.55$, $p < 0.001$) between autonomy and relational governance, providing preliminary evidence for H1. But, significant correlations among the independent variables suggested using multivariate regression techniques to examine the variance in the endogenous variable uniquely explained by the theoretical constructs of interest to the hypotheses.

4.3.2 Regression Results

As a multivariate dependence technique, we relied on hierarchical ordinary least squares regressions (OLS). For testing the implications of franchisee incentive characteristics on the relationship postulated in the first hypothesis (H2a through H2e), moderated OLS regressions were estimated (Aiken and West 1991). These are appropriate to reveal whether a certain variable, the moderator, has an influence on the strength and/or form of the relationship between an independent and a dependent variable.

To assure that our results are reliable, we controlled that the assumptions of multivariate regression techniques were met. Variance inflation factors, Kolmogorov-Smirnov as well as Breusch-Pagan tests gave no indications for any of the assumptions being violated.

We first regressed relational governance on the system dummies and the independent variables except for autonomy (Model 1 in Table 5) and found this estimation to be highly significant (adj. $R^2 = 0.418$, $p < 0.001$).

Distance ($b = -0.001$, $p < 0.01$), success ($b = 0.255$, $p < 0.001$), and competition ($b = -0.103$, $p < 0.01$) came out significant.[4] In a second step, we added autonomy to the regression equation (Model 2). The coefficient for this variable was positive ($b = 0.489$) and highly significant ($p < 0.001$). H1 was therefore strongly supported. With an adjusted R^2 of 0.48, explanatory power of Model 2 was high. Compared to the null model in column 1, Model 2 added 5.2 percentage points to the explanation of variance in the data. Significance of the overall model lay at the 0.1 percent level.

The results of the moderated regression models are presented in columns three to seven of Table 5. H2a stated that franchisors would invest less in shared

[4] Note that System Dummy 1 and 4 were positively and significantly related to relational governance. The dummy variables may capture the general or average level of franchisee autonomy within a chain and therefore be related significantly to relational governance. This average level of autonomy, in turn, is determined by the business the franchise system operates in, the level of competition the franchise system faces, and environmental uncertainty.

exchange norms for every level of decision-making authority of multi-unit compared to single-unit franchisees since incentives of the former are more closely aligned with the network. The coefficient of the interaction term was expected to be negative, attenuating the strength of the positive relationship of H1. Model 3 displayed a negative ($b = -0.397$) and marginally significant coefficient ($p < 0.10$) of the interaction term between autonomy and multi-unit ownership. Hence, H2a was weakly supported by the data. The unique variance explained by the interaction term amounted to 0.6 percentage points.

H2b supposed that the older the franchisee-franchisor relationship, the weaker would be the need for relational safeguards. Although the coefficient of the interaction term was negative ($b = -0.009$), as expected, it was not statistically significant (see Model 4). The data therefore did not support H2b.

H2c suspected geographic distance between an outlet and the chain's head office to positively moderate the strength of the relationship between autonomy and relational governance. While the sign of the coefficient was in the direction expected (see Model 5), the influence was not different from zero on statistical grounds. H2c was therefore not supported.

The data however lent support for H2d which presumed that it would become less important to accompany decision-making independence with relational control mechanisms the more successful the franchisee (see Model 6). The coefficient of the interaction term was negative ($b = -0.142$) and statistically significant ($p < 0.05$). The amount of unique variance explained amounted to 1.1 percent.

H2e suggested a positive coefficient of the interaction between the level of intra-chain competition perceived by a franchisee and autonomy. Indeed, Model 7 revealed a positive ($b = 0.083$) and statistically significant ($p < 0.05$) coefficient. H2e was therefore supported. The interaction term explained 0.8 percent of unique variance in the dependent variable.

4.3.3 Post Hoc Analyses

For Models 3, 6, and 7, which revealed significant coefficients of the interactions between autonomy and multi-unit ownership, success, and competition, respectively, we conducted post hoc analyses (Aiken and West 1991). From these analyses, we found that multi-unit ownership, success, and competition influenced, as proposed in our hypotheses, the strength but not the form of the relationship between the autonomy and the dependent variable. It is especially noteworthy that autonomy was, consistent with our predictions, not related at all to relational governance for the group of multi-units owners. In addition, while the simple slope at low levels of competition was insignificant, it was statistically different from zero at mean and high levels of rivalry.

Table 5. Regression results of direct and moderated effects

	Dependent variable: Relational governance						
Model	1	2	3	4	5	6	7
Constant	5.183***	5.158***	5.153***	5.152***	5.168***	5.204***	5.184***
	(0.114)	(0.108)	(0.107)	(0.109)	(0.109)	(0.108)	(0.108)
System 1	0.749**	0.630**	0.648**	0.627*	0.633**	0.628**	0.652**
	(0.253)	(0.240)	(0.239)	(0.240)	(0.240)	(0.237)	(0.238)
System 2	0.228	0.318	0.308	0.321	0.316	0.300	0.266
	(0.385)	(0.364)	(0.362)	(0.365)	(0.365)	(0.361)	(0.363)
System 3	0.658	0.620	0.618	0.633	0.635	0.521	0.649
	(0.496)	(0.469)	(0.466)	(0.470)	(0.470)	(0.466)	(0.465)
System 4	0.818**	0.685**	0.652**	0.674**	0.690**	0.778**	0.728**
	(0.247)	(0.235)	(0.234)	(0.237)	(0.235)	(0.236)	(0.234)
System 5	-0.016	0.022	0.033	0.038	-0.022	-0.012	0.018
	(0.228)	(0.216)	(0.215)	(0.219)	(0.220)	(0.214)	(0.214)
System 6	-0.135	-0.100	-0.072	-0.094	-0.106	-0.126	-0.071
	(0.227)	(0.215)	(0.214)	(0.216)	(0.215)	(0.213)	(0.214)
System 7	0.265	0.263	0.262	0.270	0.271	0.186	0.295
	(0.294)	(0.277)	(0.276)	(0.278)	(0.278)	(0.276)	(0.276)
System 8	-0.087	0.317	0.353	0.328	0.304	0.240	0.263
	(0.260)	(0.259)	(0.258)	(0.260)	(0.260)	(0.258)	(0.258)
System 9	-0.593	0.160	0.305	0.158	0.204	0.434	0.175
	(0.378)	(0.389)	(0.395)	(0.390)	(0.395)	(0.403)	(0.387)
System 10	0.466†	0.380	0.396	0.378	0.384	0.405	0.361
	(0.263)	(0.249)	(0.247)	(0.249)	(0.249)	(0.246)	(0.247)
Multi-unit ownership	0.013	0.004	0.020	0.012	-0.001	-0.005	0.003
	(0.155)	(0.146)	(0.146)	(0.148)	(0.147)	(0.145)	(0.145)
Age of relationship	0.007	0.009	0.009	0.007	0.010	0.010	0.008
	(0.013)	(0.013)	(0.013)	(0.014)	(0.013)	(0.013)	(0.013)
Distance	-0.001**	-0.001*	-0.001*	-0.001*	-0.001*	-0.001**	-0.001*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Success	0.255***	0.196***	0.191***	0.194***	0.205***	0.205***	0.207***
	(0.052)	(0.051)	(0.050)	(0.051)	(0.052)	(0.050)	(0.051)
Competition	-0.103**	-0.073*	-0.072*	-0.072*	-0.072*	-0.078**	-0.073**
	(0.028)	(0.028)	(0.028)	(0.028)	(0.028)	(0.028)	(0.028)
Autonomy		0.489***	0.485***	0.490***	0.479***	0.498***	0.477***
		(0.100)	(0.099)	(0.100)	(0.101)	(0.099)	(0.099)
Autonomy x Multi-unit ownership			-0.397†				
			(0.214)				
Autonomy x Age of relationship				-0.009			
				(0.018)			
Autonomy x Distance					0.000		
					(0.000)		
Autonomy x Success						-0.142*	
						(0.062)	
Autonomy x Competition							0.083*
							(0.042)
n	208	208	208	208	208	208	208
F	10.894	12.937	12.533	12.141	12.715	12.750	12.588
Adjusted R^2	0.418	0.480	0.486	0.478	0.479	0.491	0.488
Δ in adj. R^2		0.062	0.006	-0.002	-0.001	0.011	0.008
F Δ in adj. R^2		24.000	3.433	0.293	0.501	5.206	3.881

Standard errors in parentheses. Significance levels (two-tailed): *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; † $p < 0.1$. Independent variables have been mean centered (all models) in order to circumvent problems of multicollinearity associated with interaction terms.

5 Discussion

5.1 Findings and Null Findings

The empirical results were fully supportive for our main thesis that franchisors would confront agency problems triggered by franchisee autonomy with relational forms of governance. However, we found only mixed evidence for franchisee incentive characteristics to affect the severity of these problems at every given level of local decision-making independence such that the intensity of observed exchange norms would differ accordingly. While multi-unit ownership and success attenuated, and competition exacerbated the need for relational control as expected, age of the relationship and geographic distance did not emerge as significant moderator variables.

Concerning age of the relationship, one important shortcoming of our measurement instrument may provide an explanation for the null finding. Measuring age of the relationship as the number of years elapsed since the first outlet was opened by any franchisee does not capture the full length of the relationship for every sampled dyad. It is a frequent phenomenon that the career path of franchisees involves employment by the company prior to starting an outlet (Bradach 1997). In addition, even if the full relationship length had been grasped, the measure would not plainly reflect the severity of agency issues at hand. For equal relationship lengths, the goal discrepancies are more severe for a franchisee not previously working at the chain's head office compared to a former employee. In this regard, prior socialization into an organization can be an effective way of aligning interests (Ouchi 1980).[5] From a theoretical perspective, the insignificant interaction term may stem from the two conflicting incentive effects possibly resulting from an increase in relationship length as outlined in the argument leading up to H2b. On the one hand, age of the relationship positively influences the expectations about the continuity of the liaison in the future and thus the time horizon over which system-specific investments can be amortized. On the other hand, franchisees gain in experience over time and may therefore be increasingly reluctant to comply with imposed standards.

As regards distance, we already acknowledged a methodological problem related to its operationalization for we relied only on the first two out of five digits of franchisees' postal codes to determine the geographical position of each outlet. Put into perspective, however, the inaccuracy of the measure did not appear to be

[5] A statement of the COO of one chain studied by Bradach illustrates this point: "The company people know the system. They are proven operators and they appreciate the importance of maintaining standards and running the business right" (p. 292). Hence, former company managers understand the requirements to operate an outlet and their experience as company managers allows them to appreciate the importance of maintaining standards.

a serious concern as plausible and significant correlations of distance with other variables emerged from the data; for instance with autonomy (see Table 5). One theoretical account for the insignificant interaction term stresses that information asymmetries may have become more independent of physical distance with the rise in information technologies in the late 1990's (Ehrmann 2002). As a result, the severity of agency issues for remote and nearby outlets and the subsequent need for relational safeguards are likely to have converged to some degree.

5.2 Implications for Managers

The present study bears clear implications for the management of franchised distribution channels. First, since our results revealed that multi-unit franchisees necessitate less governance intensity in light of decision-making independence, limiting the number of single-unit partners could lead to efficiency gains.[6] As a consequence, the extent of intra-chain competition faced by each outlet would also be reduced. Benefits may be derived from lower intra-chain competition as the findings indicated that those franchisees facing few competing outlets require less control. Furthermore, the data made a good case for the presumption that high performance relative to comparison levels fosters incentive alignment with the company. Hence, it may potentially pay-off to leave rents downstream to induce efficient decentralized operations.

Second, against the backdrop that the incentive characteristics of franchisees are not easily modifiable in the short-run, franchisors should carefully pay attention to selectively grant decision rights to those partners which are expected to behave appropriately. This could help to increase returns from local adaptation as smaller control costs should be incurred to achieve Pareto-improving results. More generally, managers should be aware of the linkage between structural (that is, autonomy) and behavioral (that is, relational governance) processes in the management of channel members.

Finally, our research draws attention to the value of relationships in governing dispersed outlets. Though we did not provide empirical evidence on the performance effects of relying on relational governance to control decentralized decision-making structures, our findings suggest that norms of behavior provide a powerful safeguard against opportunistic abuses of decision rights. Companies which invest in the relationships to their dyadic partners in the presence of exchange hazards brought about by downstream autonomy should outperform those chains foregoing close ties, ceteris paribus.

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[6] Note, however, that multi-unit ownership also reintroduces some of the problems franchising seeks to solve in the first place, namely shirking on effort on behalf of employed outlet managers. These agency problems then occur between the (non-managing) multi-unit owner and his employee-managers at the stores under his control.

5.3 Limitations

This study is subject to several limitations. First, standard criticisms of data from perceptual survey-type measures such as ambiguity of questions, nonresponse biases, and common methods variance apply. We sought to minimize the ambiguity of questionnaire items by means of extensive pre-tests with franchisees and experts. Comparison of average sampled franchisees in each chain with the average computed from the systems' populations revealed no evidence for obvious response biases. To deal with common method variance from social desirability, guarantees of anonymity were provided to respondents. Normally distributed summated scales were indicative of social desirability effects being negligible.

Second, it has to be noted that we relied on newly developed items to operationalize the relational exchange norms. However, care was taken in the construction of the scale. The formulation of the questionnaire items arose from a qualitative-explorative pre-study with franchisee focus groups. In addition, the results from a principal component factor analysis as well as inspection of Cronbach's alpha, item-to-total and inter-item correlations, all reported earlier, accommodated concerns about reliability issues.

6 Conclusion

Relying on franchised outlets for decision-making in various functional areas such as marketing, product design or pricing can bring about important efficiency gains and enhance system-wide adaptability. These positive effects from entrepreneurial autonomy are threatened to be offset by agency costs which arise from imperfect alignment of interests among the vertical channel partners. The theory led us to infer that franchise companies would use relational forms of governance to counterbalance their loss in control associated with allocating decision-making independence to individual outlets. The results from an empirical analysis based on German franchisees strongly supported this presumption. Furthermore, the data partly confirmed our thesis that franchisee incentive characteristics alleviate or intensify the need for relational safeguards in light of downstream decision control.

Though this study was conducted within the context of franchising, its implications may be extended to other inter- as well as intraorganizational relationships between principals and agents (for example, between sales manager and salesforce agents, between venture capital firms and their portfolio companies, and between employers and empowered employees). While organizations make extensive use of formal control mechanisms such as contracts, monitoring and certification, some degree of residual vulnerability to individual self-interest seeking and organizational goal conflicts often remains. As a consequence, realizing the full economic value of agents' specific knowledge is put into peril. Relational forms of governance can play a prominent role in reducing the costs from trading hazards thereby paving the way for successful decentralized decision structures.

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Table A1. Details of constructs and measures

Construct	Description of Measures	Cron-bach's α
1 Multi-unit ownership	Do you own more than one franchise outlet? (no = 0; yes = 1)	
2 Age of the relationship	In which year did you join the franchise system?	
3 Competition	The number of franchised outlets has exceeded a reasonable size. (disagree-agree, 7-point scale)	
4 Success	a Within another activity and with the same level of effort I could realize an income which is … (higher-lower, 7-point scale).	0.83
	b Compared to the average development of sales in my industry I would rate my last period's sales as being… (lower-higher, 7-point scale).	
	c Compared to my expectations my last period's income was… (lower-higher, 7-point scale).	
	d Compared to my last period's sales objectives my last period's sales were… (lower-higher, 7-point scale).	
5 Relational governance	*Harmonization of conflict*	0.87
	a My franchisor understands my problems and concerns. (disagree-agree, 7-point scale)	
	b My franchisor seeks compromises to accommodate conflicts. (disagree-agree, 7-point scale)	
	c Disputes are not typical for the relationship between me and my franchisor. (disagree-agree, 7-point scale)	
	Cooperation	
	d When making decisions which concern me, my franchisor takes into account my opinion. (disagree-agree, 7-point scale)	
	e My franchisor asks me for participation in his long-term planning process. (disagree-agree, 7-point scale)	
	f I receive information from my franchisor on time. (disagree-agree, 7-point scale)	
	Trust	
	g My franchisor does not exploit my dependency. (disagree-agree, 7-point scale)	
	h My franchisor's trust in me is high. (disagree-agree, 7-point scale)	
	i I can follow the recommendations of my franchisor without any hesitation. (disagree-agree, 7-point scale)	
6 Autonomy	a The franchisor's standard operating procedures do limit my autonomy… (agree-disagree, 7-point scale)	0.64
	b I am free to implement own ideas. (disagree-agree, 7-point scale)	
	c I am my own boss. (disagree-agree, 7-point scale)	
	d As franchisee I feel more like an entrepreneur rather than like an employee. (disagree-agree, 7-point scale)	

Beneficially Constraining Franchisor's Power

Thomas Ehrmann and Georg Spranger[1]

Abstract. Typical contracts assign both coercive and non-coercive means of power to the principal's side, providing the agent with a comparably small range of countervailing anti-power. Initially agents are therefore vulnerable to opportunistic principal behavior and will rationally anticipate this threat upon signing a contract.

In this paper we analyze various forms of power and explain their asymmetrical allocation in the franchising industry. We demonstrate how franchisors restore those shifts in power that seem to disorder the desired balance by performing contractual, financial and organizational adjustments. The nature of these measures suggests that franchisors should cooperate with agents despite their freedom to behave opportunistically. According to empirical data, the better a franchisor is able to credibly alleviate a franchisee's fear of being exploited by principal opportunism, the stronger the growth generated in the entire franchise system that embraces both the company-owned and the franchise arms.

Keywords. Franchising, plural form, ownership redirection, coercive power

1 Introduction

Driven by our interest in the organization of franchise chains, this work elaborates on the allocation of power in franchise arrangements, thereby building on the insights gained from two earlier papers.[2] Both deal with "plural forms" – a term relating to the parallel use of company-owned and franchise outlets within the same organizational structure[3] –, and provide five findings to note before starting with this current research:

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[2] These are Ehrmann and Spranger (2004, 2005a) and Ehrmann and Spranger (2005b).

[3] See Bradach (1997), Bradach (1998), Lewin-Solomons (1999).

Firstly, the franchisor's income streams generated from either of the two distributional channels differ greatly. Whereas franchisees generally outperform the average company-manager in terms of generating sales, the standard franchisor extracts more profit – gross profit and in terms of return on capital – from each single company unit.[4] Secondly, plural franchise chains have proven more profitable than wholly franchised systems. Thirdly, despite these economic effects, plural chains do not strategically convert current franchisees back to full ownership, probably because the benefits of plural structures are greater than their costs.[5] It has been shown – the forth aspect – that instead of using dual structures to lower organizing costs, to improve short term growth or to optimize risk exposure (measures promoting the company-owned arm at the expenses of the franchisees), applying the plural form to improve a system's level of total quality benefits both franchisees and company-owned units. Thus being the fifth aspect, empirical data indicates that successful franchisors prefer to cooperate with both types of agents and refrain from exploiting the franchising part opportunistically. Other studies support this hypothesis by presenting evidence that franchisors willingly abstain from using their full range of power towards franchisees. Whether it is granting of quasi-rents to franchisees, computing royalty rates based on revenue instead of on profit or keeping contracts steady despite varying conditions (e.g. geographically, macro-economically, franchisee individually, etc.)[6] – these all indicate (voluntary) cooperative franchisor behavior despite a formal ability to make use of their opportunistic power towards agents.

In order to provide a better understanding on how to best use the powers given to the contracting parties of franchise organizations, this paper addresses both franchisees and franchisors. While we explain with respect to the former, why it is important that franchisors hold substantial powers when running a franchise system successfully, from the perspective of the franchisors we propose how and why these powers must be applied accurately for the benefit of all system members.

Doing this, in the first section we will lay out the formal power structure of franchise systems, focusing on power asymmetries that favor the franchisor and leave the franchisee with a rather small amount of countervailing power. It will then be analyzed how, despite these power asymmetries, franchisors achieve to credibly convince franchisees that they will not have to suffer from detrimental opportunistic actions applied by the still powerful franchisor either ex-ante (section two) or ex-post (section three) of signing the contract. Questioning the consequences of what can be called (a more) cooperative principal behavior, in section four we will investigate the consequences of cooperativeness, hypothesizing that

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[4] See Shelton (1967) for a discussion on franchise and company-owned outlet efficiency.

[5] Such positive aspects need not only to make the combined distributional channels better than just one form on its own, but they have also to compensate for those negative effects (e.g. an increase in complexity and monitoring costs) that arise when dealing with two instead of just one organizational instrument.

[6] See Ehrmann (2002), 1137-1144.

cooperative franchisors may be eventually more successful in the long term than their likely opportunistically acting competitors.

2 Power Allocation in Franchise Chains

Instead of fully integrating their channels of distribution, (plural) franchisors sell some or all of the contractual rights for using a standardized concept to legally independent franchisees. Paying the fees[7], the franchisee is permitted to use the concept within the limits defined by the franchisor. He is simultaneously expected by contract not to change or adapt the concept without the franchisor's approval. Within such franchise arrangements, power – such as the ability of some individual or group to control or influence the behavior of another – can be exercised by both contracting parties towards each other. The franchisor's sources of power enable him to apply both coercive and non-coercive forces to achieve control over his franchisees. Due to French/Raven (1959) and Hunt/Nevin (1974) we know that coercive power is based on the franchisee's anticipation of possible punishment by the franchisor in case of non-compliance. The four means of non-coercive force on the other hand originate from the franchisor's ability to exert reward, legitimate, referent and expert power. For each case the magnitude of non-coercive power is determined by the franchisee's expectation of how effectively the franchisor is able to grant rewards for obedience, how intensely the franchisor deserves compliance for being the legitimate superior, how much the franchisee refers to the franchisor's goals as those that also benefit himself and how strongly the franchisee accepts the franchisor's expertise as being equitable. The sum of coercive and non-coercive forces determines the potential of the franchisor's gross power, which in turn is reduced to net power by the franchisee's ability to countervail the principal's force. According to Emerson (1962), controlled members such as franchisees may build up anti-power by reducing their motivation to follow the given goals, by seeking alternative gratification sources of those goals, by improving their ability to adjust the goals according to their own wishes, and by opposing the former alternative sources for achieving the principal's goals.[8] One

[7] These are a one-time franchise fee due upon joining the system, ongoing royalty rates for using the trademark and marketing fees supporting efforts in national advertisement.

[8] These issues are more deeply discussed by Etgar (1976). Note that according to Gaski (1984), 25, the countervailing agent power is of different nature than the power exerted by the principal. "Countervailing power is channel member B's ability to inhibit channel member A's power over B's decision variables … Countervailing power does not refer to B's ability to control A's decision variables. That is B's power over A and represents a parallel structure. … B's ability to get A *not* to do something A would otherwise have done (countervailing power) is formally equivalent to B's ability to get A to do something A would *not* otherwise have done (power). The only operational difference is the target decision variable set." Within a broader economical context, Galbraith (1956), 111, therefore defines "countervailing power" as "restraints on power" – alternatively one could term it "countervailing of power" as well.

practical example for increasing negotiating power vis-à-vis the franchisor lies in the forming of franchisee interest groups, a phenomenon highly visible especially at large franchise chains. In total, a franchisor's net power over his franchisees results from the sum of gross power corrected by the amount of franchisee countervailing power. As long as the total of such net power differs from zero, we assume the power structure of the franchisor-franchisee channel to be asymmetric.

As long as the franchisors need to control franchisees for sticking to the rules, thereby safeguarding the business model as well as the good (i.e. compliant) system members against detrimental actions by bad system members, the principal needs to maintain a net power setting greater than zero. Such asymmetrical allocation of power favoring the franchisor benefits the system as long as it is not abused for a single-sided exploitation of franchisees.

For the franchisor to use his powers effectively when building an environment of franchisee compliance, he needs to know that the strength of his gross power is determined rather by what power channel-members believe he is willing and able to exert, than by what he could really exercise. As Lusch and Brown (1982) have demonstrated, the more a subordinate channel member B (the franchisee) believes another superior channel member A (the franchisor) will use potential coercive instruments, the more power A has over B. Thus in order to establish an environment of compliance, the (presumed) existence of coercive power is important, exercising it though is not. Moreover empirical work by Hunt and Nevin (1974) suggests that the franchisee's satisfaction level increases as the principal prefers the use of non-coercive forces to coercive ones to run the organization. Gaski (1984) proposes that exercising power to influence a channel member's behavior decreases the satisfaction of that individual and thus increases the potential of intrachannel conflict. Unexercised power is supposed to work exactly the opposite way by increasing the member's satisfaction and by decreasing the likeliness of channel conflict. Practically, an increase in satisfaction will probably improve both the franchisee's morale and his cooperativeness, and will simultaneously reduce the likeliness of voluntary contract termination, the filing of lawsuits against the franchisor and demanding further protective legislation.[9] In total, seeking franchisee satisfaction should be a major task on the growth-oriented franchisor's to-do list. And indeed, franchisors widely refrain from first using coercive means of power as long as other, non-coercive forces are available. As outlined in a study of franchise channels by Frazier/Summers (1986, p. 175), principals seem to use coercion with great reluctance, "only when other types of influence strategies have failed to produce a satisfactory response on an important issue". Concerning the impact of an asymmetrical power structure on the effectiveness of a channel organization, their conclusion is twofold: First: "The positions of the manufacturer and its dealers tend to be more congruent when the manufacturer has high power based on the dealer's dependence in the interfirm relationship. Furthermore, the manufacturer is able to make more effective use of information exchange under

[9] Hunt and Nevin (1974), 187.

these conditions. These factors tend to reduce the manufacturer's need to engage in overt influence attempts [both coercive and non-coercive] with its dealers."

And second: "Manufacturers with high power are better able to utilize non-coercive influence strategies (e.g. requests) effectively when overt influence attempts seem appropriate, and thereby avoid the use of coercion."[10]

As we understand from this analysis, even though the (presumed) existence of coercive forces in the hands of the franchisor – widely adding to an asymmetrical power structure – is vital to establish and to maintain compliance among subordinate channel members and thus to increase a system's organizational effectiveness, using non-coercive means instead will positively impact the agent's satisfaction with the system. However, prior to joining a franchise system with asymmetrical power structure, even potentially compliant members have to anticipate the application of damaging power if the franchisor should decide to act opportunistically. Thus for franchisors to attract good franchisees it is crucial to credibly signal their restraint from exercising opportunistic action by abusing their dominant power, both ex-ante and ex-post of the agent signing the contract.

3 Managing the Franchisee's Ex-ante Risk

The process that prospective franchisees are supposed to complete when considering joining a franchise system has been well documented by a variety of consulting sources.[11] Generally they advise franchisees to narrow the possible alternatives to a finalist group by matching the available business opportunities with their own preferences. Subsequently, and in order to decide on one system, the applicant should thoroughly research his targets' strengths, weaknesses, chances and risks by using public (e.g. rankings, awards) as well as disclosed (e.g. the Uniform Franchise Offering Circular (UFOC)) information and, important, by interviewing the franchisor as well as current and former franchisees. Resource consuming evaluation processes intend to match the agent's needs with those of the principal, to select the optimal work environment for the franchisee and to find an investment prospect where risks and opportunities are balanced according to the investor's profile and where the entrant's investment is well protected against avoidable (capital) loss.

Opportunistic franchisor behavior is one of the most prominent of such preventable risk factors as its impact on the franchise investment performance is extraordinarily detrimental. Therefore large parts of the system selection process are concerned with finding a franchisor that will neither abuse his principal power ex-ante nor ex-post of signing the franchise agreement.[12] The more franchisees feel

[10] See Frazier and Summers (1986), 175.

[11] Most prominent are online sources like www.smallbusinessnotes.com, www.betheboss.com, www.aafd.org, www.franchise.org or www.entrepreneur.com (10/01/04).

[12] It is the primary intention of disclosure statements like the (UFOC) to provide detailed information on the franchise system and thus to protect the agent from disadvantageous surprises ex-post of signing the contract.

exposed to investment uncertainty, the more a franchisor is challenged by the following two issues: Firstly, prospective franchisees will be deterred from joining the system ex-ante if one or more competitors are able to credibly offer a more secure work environment and a more promising investment opportunity, i.e. one in which the perceived risk to incur capital damage due to franchisor opportunism is smaller, everything else being equal. And secondly, existing franchisees could be motivated to leave the system as the perceived risk of being treated unfairly begins to outweigh the supposed upside potential from being a member of the chain.

Taken together, both scenarios cause more substantial harm to the franchisor's reputation if made public, further increasing the difficulty of winning new members to join the system and thus to maintain a durable strategy of system growth.

Statistics on intra-channel disputes demonstrate the importance of a trustworthy franchisor-franchisee relationship. The National Franchise Mediation Program (NFMP), established in 1993 by the CPR Institute for Dispute Resolution to resolve franchisor-franchisee conflicts without the expense and hostility of litigation, reports 96 cases filed by their 50 member chains in 1997 alone.[13] Deducting those seven disputes jointly filed, roughly 70% of the cases were filed by franchisees. Concerning the subjects of the disputes, problems over encroachment[14] (34%) dominated the list, exceeding alleged contractual (27%) and financial (15%) violations. Less frequent were disputes dealing with the non-renewal of agreements (10%), development rights (7%), lease claims (3%), the sale of a franchise business (2%) and customer service (2%). Assuming that the number of disputes settled over the NFMP resembles a small but representative fraction of all lawsuits filed between franchisors and franchisees in 1997, the prospective franchisee's concern about minimizing conflict potential seems justified. Moreover the higher the agent's investment, the greater will be the risk of capital loss in case of opportunistic franchisor behavior. Therefore it seems just rational for franchisees to ask additional sureties from the franchisor against detrimental principal conduct as investment volumes and/or asset specificity increase.

Such commonly used securities can be of public relational, of contractual or of financial nature: The first group contains measures like participating in franchise system evaluations (e.g. the yearly Franchise500 by the Entrepreneur Magazine), publishing internal franchisee satisfaction surveys, joining interest groups like the

[13] Data is available at www.franchisemediation.org (01/10/04).

[14] According to www.franchiselaw.net (02/10/04), encroachment is defined as "the situation when a franchisor opens a company-owned unit or allows a franchisee to open a franchised unit near another franchisee's unit. If the franchisee with the first unit suffers economic harm as a result of the opening of the new unit, that franchisee may have a claim against the franchisor for encroachment. Encroachment can also be caused by a franchisor selling goods or services in a franchisee's territory through non-franchised channels of distribution." There is no reliable data on the numbers of franchisors granting exclusive territories to franchisees. Personal interviews with franchisees though support the thesis this is a rather rare option to be offered. Franchisors seem to prefer to remain in charge of decisions concerning the exploitation of geographical entities.

NFMP, or submitting to the standards of the AAFD which promotes the fair franchising seal.[15] All of these measures intend to visibly strengthen the franchisor's reputation as being a fair and non-opportunistic contracting partner by allowing for corporate governance transparency and open discussion on chain policy.

The second group of contractual measures includes concessions like the installation of a powerful franchisee advisory council-type organization that has a role in decision-making and to which the franchisor is contractually committed.[16] Cochet/Ehrmann (2005a) propose such franchisee councils to strengthen the enforcement of agent interests through threatening the deviant franchisor with collective franchisee punishment. Another powerful contractual instrument in the hands of the franchisor is to vary the length of the franchise contract. Due to the practical difficulty of enforcing franchise contracts by court decisions, longer terms will signal the franchisor's motivation not to appropriate the franchisee's rents opportunistically before the agent has received his projected return on investment.

Finally a third instrument for the franchisor to signal cooperativeness is to offer financial support for franchisees that are about to invest into the system. By risking personal equity and thus holding a stake in the franchisee's venture, franchisors are able to signal their willingness to share some of the financial risk encountered by franchisees. The following quantitative analysis uses contractual and financial instruments to explore whether and how franchisors achieve to overcome franchisee's ex-ante uncertainty.[17] The hypotheses tested are the following:

H1: The length of franchise contracts are positively correlated with the investments asked of the franchisee.[18]

H2: The scope of franchisor financial support is positively correlated with the investments asked of the franchisee.[19]

Out of the data provided by the Entrepreneur Magazine and covering 925 US-franchise chains from 1979 to 2003, 343 systems had length of contract information ("Terms") available and provided financial help ("Finance") through in-house

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[15] The Fair Franchising Standards are controlled by the American Association of Franchisees and Dealers (www.aafd.com). Other regions have comparable guidelines like the ethic code of the European Franchise Federation (www.eff-franchise.com).

[16] See Selden (2000).

[17] Through the lack of appropriate data, public relational instruments could not be tested within this process.

[18] Such a concession keeps the franchisor from opportunistically appropriating franchisee rents through the arbitrary cancellation or non-renewal of contracts, thereby refusing the franchisee to amortize his investment and thus causing him financial harm.

[19] As stated above the franchisor is able to signal credibility into cooperational conduct by sharing part of the franchisee's investment risk with personal equity or by using his reputation and track record in order to acquire franchisee financial support through third party sources.

("In-house") or third-party ("Third-party") sources. In order to avoid statistical distortion through extreme values, the selected franchisors had to request an investment volume ("Intercept") of less than two million dollars.[20]

For the purpose of analyzing organizational measures in section 4, we employ Lambda as the degree of franchising – this measure is arrived at by dividing the number of franchised outlets by the number of all (franchised and company-owned) units. Linear regression results are displayed in tables 1 and 2 below.[21] They reveal significant support for the hypothesized franchisor objective to contractually and financially compensate franchisees for increased investment risk.

Table 1. Investment Volume and Financing Options

Coefficients (a)	Non-standardized coefficients		Standardized coefficients		
Model*	B	Standard error	Beta	T	Sign.
Intercept	370,550	88,207		4,201	,000
Terms	7,902	2,664	,152	2,966	,003
In-house	-28,877	12,036	-,132	-2,399	,017
Third-party	25,648	7,175	,199	3,575	,000
Lambda	-327,718	84,093	-,194	-3,897	,000

(a) Dependent variable: Investment volume in T€
* N= 343, R-Square= 0,166, F= 16,840, Sign. at 0.1% level.

Table 2. Investment Volume and Financing

Coefficients (a)	Non-standardized coefficients		Standardized coefficients		
Model*	B	Standard error	Beta	T	Sign.
Intercept	327,147	90,595		3,611	,000
Terms	10,706	2,685	,206	3,988	,000
Finance	18,383	7,243	,131	2,538	,012
Lambda	-332,631	86,814	-,197	-3,832	,000

(a) Dependent variable: Investment volume in T€
* N=343, R-Square= 0,109, F= 13,764, Sign. at 0.1% level.

According to tables 1 and 2 the duration of the franchisee agreement is strongly and positively correlated with the required investment volume. This is meaningful for franchisees as two coercive means of franchisor power are affected when terms increase: extraordinary contract termination, and the denial of contract renewal.

[20] Those chains sorted out by the $2M-cap represent only 4% of the entire sample of 925 but they account for 75% of the standard deviation in investment volumes.

[21] See appendix 1 for correlation results.

Concerning the first issue of terminating the contract, franchisors are generally not supposed to unilaterally cancel the franchise agreement unless there was a breach of contract by the franchisee. The actual definition of a violation that suffices to end a franchise contract as well as the proper mode of applying it, is largely determined by national or local legislation practices, by the franchise ethic standards that apply and by the actual practicability to execute the written sanctions. In the United States, for instance, state laws regulate franchise relationships. Altogether 19 states have adopted restrictions on terminating franchise contracts. Canceling a franchise agreement without good cause is illegal due to these regulations. Such "good cause" includes incidents like the franchisee becoming insolvent or bankrupt, the franchisee voluntarily abandoning his operations, being convicted of a crime concerning the franchise operations or failing to substantially comply with his material obligations under the franchise agreement.[22] In a sample of 76 franchise chains researched by Brickley/Dark/Weisbach (1991), all contracts – both from states with and without termination rules – required a breach of contract for cancellation and allowed a period for correcting the causes of such violations.[23] Even the International Franchise Association (IFA) advises all members to establish a franchise relationship governed by "trust, truth and honesty"[24], which is severely impaired if a franchisor should act opportunistically and terminate contracts unilaterally and without good cause. Finally Bradach (1998) reports on the practical hurdles that franchisors encounter when asserting a breach of contract by the franchisee. For ultimately canceling a franchise contract through litigation, in the opinion of one of his franchisor interviewees: "You need a dead rat in the kitchen, and preferably three of four, if you want a chance of winning"[25]

Regarding the second issue of denying the renewal of a contract, some states require "good cause" similar to that needed for terminating the contract. Others oblige the franchisor to give the franchisee advance written notice of non-renewal and impose restrictions such as repurchase of the franchisee's assets or the waiver of any non-competition restrictions.[26] In total, we agree with Bradach (1998) that both termination and non-renewal are formal and powerful instruments, but actual enforcement of them is limited by legislation, by ethic standards, or simply by not being practical. Despite these restrictions, the threat of contract termination and non-renewal constitute the franchisor's ultimate tools to align the agent's conduct or to ultimately cancel any individual membership for the sake of all other system participants. Hence increasing the length of contracts diminishes the power of these means, which is true especially for the non-renewal threat. Longer contrac-

[22] www.franchiselaw.net (10/09/04).

[23] Excluded from the correcting period are criminal acts, bankruptcy and repeated contractual violations. See Brickley et al. (1991), 114.

[24] IFA – The Code of Ethics, www.franchise.org (10/09/04).

[25] Bradach (1998), 35.

[26] www.franchiselaw.net (10/09/04).

tual terms therefore reduce the franchisee's risk of suffering capital damages due to a principal opportunistically appropriating an agent's rents.[27]

Concerning the hypothesized financial concession of H2, correlations are interestingly diverse between outside and inside financial sources. While investment volumes increase, franchisors reduce their range of in-house financing and simultaneously strengthen their effort to provide more financial support through third-party sources (table 1). For both sources taken together, the scope of financial support is correlated significantly and positively to an increase in investment volumes (table 2). Apparently, offering financial support through third-party sources is more relevant to franchisors than providing equity.[28] Although the franchisor personally does not face financial risk when arranging third-party financing contacts, the reputation of a fair franchisor requires the offering of such sources.

A common third-party financier is the governmental U.S. Small Business Administration (SBA). The SBA approach of backing loans made by commercial institutions with a governmental guarantee transfers the risk of borrower non-payment from the lender to the SBA. Thus the usual credit risk of commercial banks is substantially reduced as soon as institutions like the SBA step in. According to SBA guidelines though, franchisees are eligible for SBA-loans only as long as the appropriate franchisor does not retain "power to control operations to such an extent as to be tantamount to an employment contract. The franchisee must have the right to profit from efforts commensurate with ownership."[29]

A franchisor appropriating a franchisee's rent through opportunistic action (e.g. by terminating the franchise relationship before the franchisee has been able to amortize his investment) would prevent the franchisee from realizing profit on his investment and would consequently lose eligibility to negotiate third-party financing like the described SBA-loans. Qualification for offering financial assistance through third-party institutions should therefore be regarded as a positive signal by any prospective, risk-conscious franchisee. Neutral screening is a means to create a trustworthy franchise business model and to reduce uncertainty in the

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[27] The reported reactions concerning lawmaker's idea to introduce restrictions of termination, demonstrate some of the importance of these tools for the franchisor. As Brickley/Dark/Weisbach (1991, 116) state: " The termination laws were opposed by major franchisors. The International Franchise Association (IFA), the primary lobbying group for franchisors, expended considerable resources opposing them … A major argument used by the IFA is that documenting good cause for the marginal franchisee 'would be difficult at best', hence the laws are equivalent to granting franchisees 'perpetual contracts'. The IFA argues that perpetual franchises make it difficult, if not impossible, to control quality within franchise system."

[28] 41,2 % of the 343 chains offer in-house financing, while 76,7% arrange contacts to third-party sources. These figures stand in contrast to those of the IFA in their Profile of Franchising (1998) study, where of 1226 chains 32% offered in-house financing, while only 10% have so called third party sponsored financing programs.

[29] The United States Small Business Administration, www.sba.gov (10/10/04).

franchisor's fair conduct.[30] The findings of tables 1 and 2 indicate that franchisors provide additional financial assistance as investment volumes increase substantially. With the degree of investment uncertainty correlated positively to the size of the investment volume, franchisors seem to signal cooperative conduct through offering additional financial support via independent third-party institutions.

In summary, both contractual and financial concessions work to ease ex-ante barriers that could otherwise deter potential franchisees from joining especially systems requiring a high investment volume. Simultaneously they measure the franchisor's ability to exercise coercive power against system members. As expressed in the IFA's position, set out in footnote 27, limiting franchisor power by means of termination makes the punishment or the expulsion of detrimental system members, and thus the maintenance of uniform quality standards, more difficult. Regarding the balance of power between a principal and an agent, in order to reduce the ex-ante uncertainty of franchisees, the franchisor consequently sacrifices part of his principal power. Doing this, he becomes more dependent on an increasingly powerful agent. As a result of this kind of shift in power, the franchisor retains a smaller range of means to protect the good members of the system from harmful actions by inferior system members. Due to the importance of the franchisor as the central guardian of system quality, we suspect this net-loss in power to be detrimental to the franchisor and to all good franchisees. Hence franchisors may substitute the loss of coercive power with a gain in non-coercive means also by effecting adequate organizational changes.

4 Managing the Franchisee's Ex-post Risk

Just like any rational investor, a prospective franchisee will want to protect his investment against unwanted risks when joining a franchise chain.[31] As demonstrated in the results of H1 and H2, franchisors perform contractual and financial changes in order to create a more fair and trustworthy franchisor-franchisee relationship, which is supposed to guarantee restraint from franchisor ex-ante opportunism. The franchisor's forfeiture of coercive power, which is a consequence of these measures, is detrimental in two respects:

Firstly, both concessions – extending contractual terms, and using its reputation to acquire third-party financial sources – shield the agents from exploitation only as

[30] The UFOC demands a description of any assistance available from the franchisor or its affiliates in financing the purchase of the franchise.

[31] We are fully aware that there are more risk factors for franchisees to consider prior to joining a system than just being exploited by an opportunistically acting franchisor. Obviously we picked one issue out of a broad spectrum that seemed central for us. Risk factors like choosing the wrong business concept, the wrong vicinity for the outlet or just the wrong time for starting and many more still remain problematic even after the perfectly fair franchisor has been identified.

long as the franchisor intends to manage and to grow the system for a time exceeding the duration of the franchise contracts. Both measures are of little value if the franchisor plays a one-shot game by attracting franchisees through signals of trust and by bankrupting the system immediately once enough members are aboard. All rational franchisees should therefore seek protection against franchisor opportunism occurring ex-post of signing the contract as they are with safeguarding themselves from ex-ante opportunism. From the franchisor's perspective, granting additional financial support through third-party sources works fine for securing against ex-ante risk (see H2) only. After a franchisor's cash-out, a ruined reputation though will not hurt the principal much longer. Suffering from extra-debt related to increased in-house financing on the other hand would serve as a burden even after the franchisor has terminated the business. According to the reluctant use of equity displayed in the data, financial concessions are, however, not applied to demonstrate the safeguarding from a franchisor's opportunistic ex-post action.

Secondly, shifting away the power from the franchisor by means of contractual and financial adjustments results in substantial changes in a chain's economics. One extreme way of limiting franchisor power is by making more difficult the principal's ability to cancel a franchise contract through the introduction of legislation restricting termination of franchise contracts. After the introduction of so-called franchise termination laws, Brickley et al. (1991) found that franchisor give up on an important instrument of controlling quality standards and, at the outmost, of punishing misconduct by withdrawing the franchise agreement. As the cost of controlling the behavior and the performance of system members increase, the franchise channel becomes less efficient and makes a prospective company-owned arm look more attractive.[32] According to Brickley et al. (1991), such a strong unilateral restriction of franchisor power results in decreased system efficiency, in transfers of control away from the franchisor, and in significant wealth losses for the chain's shareholders.[33] Without taking appropriate counter-measures, the erosion of franchisor coercive power appears to destabilize the franchisor-franchisee relationship and to be detrimental to the franchisor and to the franchisees.

Apparently, successful franchise systems need to insure agents ex-ante and ex-post of signing the contract against opportunism by the principal. While the first is

[32] Note the diametrical intentions that are behind a franchisors strategy to substitute franchisees with company-owned units as the first become economically less preferable (because of increased controlling costs as termination laws are adopted), and a franchisor managing growth by adding more company units than franchise ones in order to benefit from the advantages of a plural form structure!

[33] Other researchers have concluded that asymmetrical power distribution within cooperational arrangements stabilizes the entire system and therefore is one important success factor (Herrfeld 1998; Kuester 2000). Bonus and Wessels (1994) find power within franchise chains to be benefiting for all system members. Frazier/Summers (1986) and Sibley/Michie (1982) argue that vast franchisor power should not generally be abolished. It is rather the actual and individual usage of this power that determines the success of the franchisor-franchisee relationship.

achieved via contractual and financial adjustments, any approach to insure agents against the second will simultaneously need to provide the franchisor with appropriate means to prevent a disadvantageous loss of overall power of the principal. According to the model developed by French and Raven (1959) and Hunt and Nevin (1974), a principal's net power is defined by the sum of his gross power minus an agent's countervailing power. The scope of coercive and non-coercive forces defines the strength of the gross power. As has been explained in section 2, non-coercive means are based on the franchisor's ability to exercise legitimate, expert, referent and reward power. In contrast to coercive means of power, all of them are generally positive to the system performance. As Ehrmann and Spranger (2004, 2005a) reveal, significant improvements of a system's total quality are achievable as a rather pure franchise system is transformed into one that is more plurally structured. Plural franchise systems profit from signaling internal information to outsiders, from aligning formerly diverse interests between its actors, from accelerating the processes of innovation, and from fostering competition between franchise and company-owned units. Moreover, all of these benefits concerning total quality strongly increase a franchisor's non-coercive power potential. Thus adjusting the organizational structure of franchised and company-owned outlets and allowing for a more plurally organized franchise chain diminishes the risk of ex-post franchisor opportunism and results in a beneficial regaining of power by the franchisor.

Zooming in on this effect, the sources of shifts in power that apply to plural structures are fourfold: Firstly, every company-owned unit has to be set up by investments of the franchisor. Being a rational investor, the franchisor should avoid any self-investment if he has little confidence in the success of his business model. The existence of company-owned operations therefore increases the franchisor's financial dependence on the success of the business model. Operating company-owned units successfully serves as a signal of trust towards all agents. It substantially increases the franchisor's credibility[34] and expands its own important legitimate power. Secondly, through the ownership of some units, the franchisor's interests as a principal become more lined up with those of his agents.[35] By aligning initially non-congruent profit schemes, the franchisor accepts the financial concerns of his franchisees and thus enhances, in their view, the perceived degree of expert power. Thirdly, the franchisor of a plural structure may benefit by each organizational form's specific strengths to improve the innovation processes. While franchises are stronger in the exploration of opportunities, company-owned units prefer the exploitation of existing innovations.[36] Thus by balancing both aspects through mixing the organizational forms, the system's innovational power is raised. By accelerating innovation processes through the plural form, the franchisor simultaneously develops referent power. And finally, the plurally organized

[34] See Gallini and Lutz (1992); Michael (2000).

[35] See Lewin-Solomons (1999).

[36] See Sorenson and Sørensen (2001); March (1991).

franchise chain creates a more competitive environment where benchmarking franchisees against managers of company-owned units leads to increased system performance.[37] By fostering such inner-firm competition, the franchisor gains on what Hunt and Nevin (1974) have called reward power.

In total, the franchisor will strengthen his potential of non-coercive power when rearranging a franchise chain's organizational structure and emphasizing the company-owned distribution channel. Thus it is possible to increase the non-coercive powers through organizational changes and thereby to compensate for a loss of coercive powers caused by contractual and financial concessions.

What needs to be explored empirically is whether franchisors use such organizational measures to insure agents against ex-post opportunism as they use contractual and financial means to eliminate the risk of ex-ante opportunism. As stated above, the franchisee's risk exposure towards franchisor opportunism is supposed to be positively correlated with the size of the requested investment volume. If franchisors use the plural form as an organizational instrument to provide insurance against ex-post opportunism, the degree of franchising should therefore be negatively correlated to the size of the investment volume.

H3: The share of company-ownership is positively correlated with the investments asked of the franchisee.

For this analysis, we characterize a chain's organizational set-up as the percentage of franchised units out of the number of all outlets under a chain's trademark (see "Lambda" in tables 1 and 2). For the year of 2003, the 343 chains of the data display a mean in Lambda of 92% and a standard deviation of 16%. The mean (standard deviation) for those (N=674) of the 925 chains of that organizational data was available for 2003 corresponded with 89% (19%).[38] In total, the regression results of tables 1 and 2 offer strong support for H3. For the sample applied, company ownership is significantly positively correlated to the magnitude of the required investments. As the above arguments suggest, the more franchisees are supposed to invest in a franchise business, the higher the risk they will face, and thus the more the franchisor has to engage in company-ownership himself.

Although we lack instruments to reveal sequential causalities of the selected parameters, the empirical results allow us to hypothesize over the pattern that evolves between the franchisor and his franchisees: When joining a franchise chain, agents request credible insurance against franchisor opportunism. As the franchisee's risks of suffering capital losses increases with rising investment volumes, the quantity of insurance given by the franchisor needs to augment concurrently. By providing additional financial sources and long-term contracts as investment volumes increase, franchisors demonstrate abstinence from ex-ante opportunism.

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[37] See Bradach (1997) and Bradach (1998).

[38] Pénard, Raynaud and Saussier (2002) compute a mean Lambda of 67% (standard deviation 68%) for 521 chains from France. Lafontaine and Shaw (2005) receive a mean Lambda of 78% (71%) for 4842 U.S. and Canadian franchise chains.

In turn though, these securities cause a loss of coercive franchisor power which weakens the necessary power asymmetry between the principal and his agents. By establishing a plural form structure, and engaging into company ownership as investment volumes rise, franchisors subsequently (need to) insure agents against detrimental ex-post opportunism. Becoming more dependent on the system's success, they will also protect all good members of the chain from deleterious behavior by opportunistic agents. Equally important, franchisors restore the former power asymmetry by gaining non-coercive powers due to the quality effects provided by plural franchise systems. While reducing ex-ante uncertainty of franchisees can be achieved through contractual and financial measures, only the introduction of an appropriate organizational structure seems to be powerful enough to insure agents against fatal ex-post opportunism.[39] What remains to be analyzed is whether offering securities against opportunism and refraining from agent exploitation is a rewarding franchise strategy.

5 Consequences of Cooperative Franchisor Management

Any assessment of a business strategy will be naturally biased by two factors: First the definition of "success" will be subjective according to the preferences of the evaluator. And second the availability of appropriate data will limit the choice of parameters along which success can be determined. Financial resources like balance sheets, income statements or stock prices are common means to evaluate the success of a business model.[40] With a minority of all franchise firms being publicly traded at stock exchanges, other parameters need to be identified to measure the success of franchising strategies. We therefore propose employing the number of outlets and their long-term development as indicators to reveal the success of a franchise chain.[41] 112 of the 925 chains contained in our sample display

[39] Franchise consultants regularly perceive the successful running of company-owned units to identify a cooperative franchisor. On the other hand, buying back franchise units, especially prime sites, and reconverting them into company stores is viewed as indicating an opportunistic franchisor. Such franchisors use company stores as a tactical instruments for appropriating the highest returns of the chain – a behavior strongly warned off by consultants.

[40] In an attempt to investigate how termination laws affect the wealth of the franchisor and the franchisee, Brickley/Dark/Weisbach (1991) examined stock returns of Californian franchise firms around the introduction of these restrictions in California (p. 126-130). They obtained only 32 publicly traded companies of that appropriate data was available.

[41] It is widely accepted among researchers of franchising that increasing the number of outlets is a plausible parameter indicating success. Future research though will have to combine the number of outlets with the specific investment volume of each chain and relate the outcome to organizational structure. Due to this logic, opening one restaurant unit for about $1 million equals setting up 10 units for $100.000 each of a service concept franchisor. This aspect has been raised in a discussion with Rajiv Dant during EMNet 2005.

such information for the entire time since the survey of the Entrepreneur Magazine was started in 1979. Covering 24 years of franchise development, these 112 chains suffice to analyze the efficiency of distinct organizational franchise strategies.

A descriptive overview of the actual growth rates of these chains reveals very heterogeneous results. On average, each chain of the sample accumulated more than 1200 stores and thus grew by nearly 500% over the period covered. The large standard variations (growth by stores: 3630, growth by percent: 2000%) indicate the diversity of the sample.[42]

As argued above, franchisors put into operation financial, contractual and organizational adjustments to their system in order to signal to their agents the franchisor's abstinence from opportunistic behavior. If these measures positively influence the development of the chain, those systems being governed rather by cooperative franchisors should achieve significantly stronger growth than those of less cooperative principals. According to the results in tables 1 and 2, a franchisor is perceived to offer a higher amount of cooperation the more plurally the chain is structured. Concerning the efficiency of cooperative franchisor behavior, we therefore hypothesize:

H4: The degree of franchising (Lambda) is negatively correlated with absolute outlet growth.

For the subsequent analysis of H4, the highly heterogeneous sample can be separated into three clusters of growth: The first set includes systems (N=31, 28%) of negative growth. From 1979 to 2003, these chains, on average, grew by –40% in number of outlets. The second cluster (N=50, 44%) contains chains of small to medium growth rates, growing by 157% in 24 years. The third set (N: 31, 28%) finally consists of systems that achieved extremely strong growth, surging by more than 1300% in outlets over the time covered.[43]

As displayed in figure 1 below, the three sets reveal very distinct organizational structures. While strong (SG) and medium (MG) growth chains (sets 2 and 3) are plurally structured with a very similar degree of franchising, negatively (NG) growing systems (set 1) operated far fewer company-owned units and almost completely relied on franchisees alone.[44]

Concentrating on the extreme examples of growth for sets 1 and 3, the results of the group statistics (table 3 below) and of the independent sample t-test (appendix 2) reveal even more distinctions in parameters beyond the degree of franchising. Apparently, the strongly growing chains are not only more plurally organized, but

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[42] Extreme values are: Growth in stores (Min –1302/Max 24432); Growth in percent (Min –89%/Max 16923%).

[43] Standard deviations are 3649% for the strong growth chains, 210% for the medium growth chains and 25% for the negatively growing chains.

[44] In 2003, SG-chains were franchised to 91% (standard deviation of 12%) and MG-chains to 89% (20%). NG-chains in contrast were franchised to 96% (6%) on average in that same year.

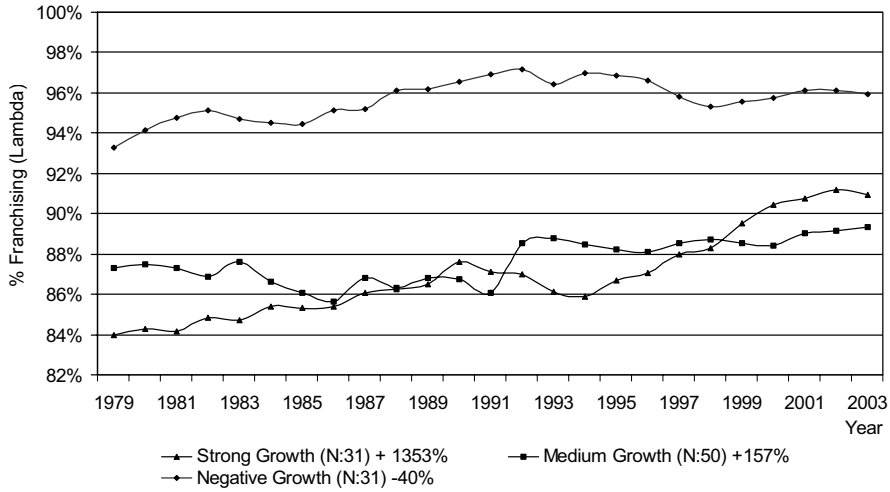


Fig. 1. Absolute System Growth and Organizational Structure

Table 3. Group Statistics

	Group*	N	Mean	Std. Deviation	Std. Error Mean
Lambda	SG	31	.909	.11640	.02091
	NG	31	.959	.05802	.01042
Investment	SG	31	1225.1	1964.82	352.89
	NG	31	575.5	832.27	149.48
Term	SG	24	16.35	5.212	1.064
	NG	28	12.57	5.397	1.020
In-house	SG	31	.84	1.594	.286
	NG	30	.37	.556	.102
Third-party	SG	31	1.90	2.399	.431
	NG	30	1.50	2.030	.371
Finance	SG	31	2.74	2.658	.477
	NG	30	1.87	1.925	.351

* SG: Strong Growth, NG: Negative Growth

they also charge their franchisees a higher initial investment and offer longer terms for franchise contracts than their negatively growing competitors. On average, SG-chains offer greater financial support to their franchisees, both for in-house and for third-party sources.

The results of the independent sample t-test mark the differences of both extremes to be highly significant concerning Lambda, Investment Volume and Terms. Diversities in financial support (In-house, Third-party and Finance) are as

expected (see the directions of t-values), but they lack statistically sound significance. Correlations between the parameters are also as projected. Results of the Kendall's Tau analysis are to be found in appendix 3.

The results of all of these tests clearly support H4. Plural franchise chains of the dataset grow significantly stronger, they request higher investment volumes and offer longer contracts than the rather purely structured systems. Interestingly, total outlet growth is fueled by an increase in franchise and in company-owned units and not by a substitution of one form for the other.[45] Other than the Brickley/Dark/Weisbach (1991) report for their sample, franchisors of the SG- and MG-chains successfully accompany contractual and financial concessions with beneficial organizational adjustments. As every new company-owned outlet requires the franchisor to invest in the system, he becomes more dependent on the chain's success as the plural form takes over. The more the franchisor requires the agent to invest in the system, the stronger is the signal that evolves from running company-owned units. Hence the franchisee's ex-post risk of being exploited opportunistically is substantially lower when joining a plurally organized chain instead of the purely structured system. The data researched in this paper suggests that franchisees respect the franchisors' signal for cooperation and reward such cooperative franchisor management by joining the chain in larger numbers.

The findings of this paper correspond to transaction cost theory. Due to empirical data of Dahlstrom and Nygaard (1999), intrachannel opportunism causes frictions stemming from costly bargaining, from monitoring and from maladaption. Bargaining costs result from negotiation between transacting parties (Milgrom and Roberts 1991), monitoring costs are expenditures to guarantee the fulfillment of contractual obligations to the best interest of the channel members (Lal 1990) and maladaption is costly because of deficient communication and poor coordination between contracting partners (Reve 1986). Those costly frictions can be reduced by improving the quality of two governance mechanisms: formalization and interfirm cooperation. While the level of formalization is determined by the scope of written franchise contracts, its force is naturally limited by the inability of contracting partners to define rules ex-ante for every thinkable situation of a business relationship. For this reason interfirm cooperation is inevitably needed to accompany formalization, as it stabilizes and guides a partnership precisely during those situations which formalized contracts are unable to specify. Reducing franchisor opportunism in franchise channels, both ex-ante and ex-post of signing the contract, is therefore highly efficient and, as demonstrated, an important determinant of strong chain growth.

[45] Compare appendix 3 for the highly significant correlations between Total Growth-Growth_FU, Total Growth_Growth_FU and Growth_FU-Growth_CU.

6 Concluding Remarks

The purpose of the preceding pages has been to examine solutions to conflicts arising from asymmetrical distribution of power between contracting partners of franchise systems. With a franchisor's net-power over his agents being greater than zero, franchisees initially anticipate uncertainty of being exploited opportunistically both ex-ante and ex-post of signing the franchise agreement. As has been demonstrated, franchisors meet rising agent uncertainty (which, for example, increases as the required investment volumes rises) by offering longer contractual terms as well as by providing additional monetary support to franchisees. Whereas the first instrument weakens the franchisor's scope to terminate or to deny renewal of contract before the franchisee's investment has been amortized, the second puts a franchisor's equity and reputation at stake if an agent is exploited opportunistically. Thus both contractual and financial concessions effectively alleviate franchisee's ex-ante barriers and make joining the system more attractive.

The franchisor though, by lowering ex-ante barriers, automatically sacrifices part of his ability to exercise coercive power over his agents, which is detrimental if the franchisor's role, of centrally guarding quality standards against harmful influence, is jeopardized. By increasing company ownership, franchisors are able to re-establish the former power asymmetry. The advantages of such organizational changes are twofold: Firstly, they gain non-coercive means of power through the quality effects of the plural form. Secondly, by becoming more dependent on the system's success, they need to rely more closely on cooperative interaction with all of their agents. Any emphasis of cooperative behavior thus greatly reduces the agent's risk of being exploited opportunistically.

Concerning a chain's economics, exchanging a franchisor's coercive means of power with non-coercive means results in truly buoyant economical benefits for the system. Chains that credibly signal cooperation generate significantly stronger growth, both for the company-owned and the franchise outlet arms as well as for the entire system. Thus to both franchisors and franchisees, the recommendations based on the findings of this paper are straightforward:

Franchisees on the one hand need to acknowledge that a strong franchisor in nothing to be afraid off in the first place (Frazier and Summers 1986; Sibley and Michie 1982). Franchisors hold centralized power to achieve concerted effort from all channel members towards meeting a chain's primary challenges of adding new units to the system, of maintaining uniformity across all outlets, responding locally when appropriate and keeping the system flexible for adaptation to new threats or opportunities (Bradach 1998). Without the ability to exercise the utmost coercive power, the franchisor exposes the entire system, including all compliant members, to be vulnerable to manipulation by a minority of non-compliant agents.

Franchisors, on the other hand, need to anticipate and to manage the franchisee's uncertainty of being exploited opportunistically by the potential asymmetry of franchisor power. Therefore they should initially use coercion with the greatest

reluctance and do so only when other means of exerting influence have failed to achieve a satisfactory result (Frazier and Summers 1986). Using non-coercive means while coercive force is available will increase both franchisee compliance (Lusch and Brown 1982) and the satisfaction level (Hunt and Nevin 1974). Additionally, cooperative management will relax intrachannel frictions and thus prevent costly litigation (Gaski 1984).

With a cooperative signaling function, building a more plurally organized system does even more than just giving the franchisor additional non-coercive means in his arsenal. Taken together, the empirical results of this study suggest the cooperative aspects of the plural form reward the franchisor through superior outlet growth as systems mature.

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Appendices

Appendix 1. Pearson Correlation Table N:343

Pearson Correlation	Factors***	Investment	Terms	In-house	Third-party	Finance	Lambda
Invesment	CC	1	.246**	-.248**	.297**	.164**	-.203**
	Sig.	.	.000	.000	.000	.002	.000
	N	343	320	343	343	343	343
Terms	CC	.246**	1	-.196**	.244**	.141*	-.022
	Sig.	.000	.	.000	.000	.011	.700
	N	320	320	320	320	320	320
In-house	CC	-.248**	-.196**	1	-.426**	.178**	.011
	Sig.	.000	.000	.	.000	.001	.832
	N	343	320	343	343	343	343
Third Party	CC	.297**	.244**	-.426**	1	.814**	-.026
	Sig.	.000	.000	.000	.	.000	.628
	N	343	320	343	343	343	343
Finance	CC	.164**	.141*	.178**	.814**	1	-.021
	Sig.	.002	.011	.001	.000	.	.695
	N	343	320	343	343	343	343
Lambda	CC	-.203**	-.022	.011	-.026	-.021	1
	Sig.	.000	.700	.832	.628	.695	.
	N	343	320	343	343	343	343

* significant at 5% level

** significant at 1% level,

*** CC = Correlation Coefficient, Sig. = Sig. (2-tailed), N = number of systems

Appendix 2. Independent Sample t-Test

		Levene's Test* for Equality of Variances		t-test for Equality of Means					
	Equal variaces**	F	Sig,	T	Df	Sig. (2-tailed)	Mean difference	95% Confidence Interval of the Mean	
								Lower	Upper
Lambda	A	10.334	.002	-2.11	60	.038	-.049461	-.09619	-.00273
	NA			-2.11	44.043	.040	-.049461	-.09654	-.00238
Investment	A	3.751	.057	1.69	60	.095	649.52	-117.08	1416.12
	NA			1.69	40.430	.098	649.52	-124.79	1423.83
Term	A	.038	.847	2.56	50	.014	3.78	.815	6.75
	NA			2.56	49.260	.013	3.78	.822	6.74
In-house	A	17.135	.000	1.53	59	.130	.47	-.144	1.08
	NA			1.55	37.410	.129	.47	-.143	1.08
Third-party	A	3.754	.057	.71	59	.482	.40	-.737	1.54
	NA			.71	57.978	.481	.40	-.735	1.54
Finance	A	9.115	.004	1.46	59	.147	.88	-.317	2.06
	NA			1.47	54.709	.146	.88	-.313	2.06

* If the significance value for the Levene test is high (typically greater than 0.05), the results that assume equal variances for both groups apply. If the significance value for the Levene test is low instead, the results that do not assume equal variances for both groups are relevant.

** A = equal variance assumed; NA= equal variance not assumed

Appendix 3. Correlation Values N :112

Kendall-Tau	Factors***	Total Growth	Lambda	Investment	Term	In-house	Third-Party	Finance	Growth_FU	Growth_CU
Total Growth	CC	1.000	-.112	.112	.207**	-.025	.078	.107	.898**	.212**
	Sig.	.	.097	.080	.007	.743	.283	.126	.000	.001
	N	112	112	112	95	108	108	108	112	112
Lambda	CC	-.112	1.000	-.201**	-.138	.096	.070	.124	-.036	-.422**
	Sig.	.097	.	.003	.088	.232	.355	.094	.594	.000
	N	112	112	112	95	108	108	108	112	112
Invest-ment	CC	.112	-.201**	1.000	.366**	-.442**	.167*	-.010	.129*	.019
	Sig.	.080	.003	.	.000	.000	.021	.881	.044	.766
	N	112	112	112	95	108	108	108	112	112
Term	CC	.207**	-.138	.366**	1.000	-.291**	.248**	.122	.204**	.093
	Sig.	.007	.088	.000	.	.001	.003	.138	.007	.233
	N	95	95	95	95	95	95	95	95	95
In-house	CC	-.025	.096	-.442**	-.291**	1.000	-.228**	.171(*)	-.040	-.020
	Sig.	.743	.232	.000	.001	.	.007	.037	.595	.796
	N	108	108	108	95	108	108	108	108	108
Third-party	CC	.078	.070	.167*	.248**	-.228**	1.000	.811**	.091	-.135
	Sig.	.283	.355	.021	.003	.007	.	.000	.208	.065
	N	108	108	108	95	108	108	108	108	108
Finance	CC	.107	.124	-.010	.122	.171*	.811**	1.000	.117	-.149*
	Sig.	.126	.094	.881	.138	.037	.000	.	.096	.038
	N	108	108	108	95	108	108	108	108	108
Growt_FU	CC	.898**	-.036	.129*	.204**	-.040	.091	.117	1.000	.108
	Sig.	.000	.594	.044	.007	.595	.208	.096	.	.098
	N	112	112	112	95	108	108	108	112	112
Growt_CU	CC	.212**	-.422**	.019	.093	-.020	-.135	-.149*	.108	1.000
	Sig.	.001	.000	.766	.233	.796	.065	.038	.098	.
	N	112	112	112	95	108	108	108	112	112

** Correlation significant on 1% level; * Correlation significant on 5% level.

*** CC = Correlation Coefficient, Sig. = Sig. (2-tailed), N = number of systems

A Cointegration Analysis of the Correlates of Performance in Franchised Channels

Rajiv P. Dant, Manish Kacker, Anne T. Coughlan, and Jamie Emerson[1]

Abstract. Not much is known about the primary drivers of performance in franchising systems. With some notable exceptions, much of the franchising literature on performance related issues has focused on either contrasting failure rates of independent small businesses and entrepreneurs with those of franchises and/or system survival issues. The existing literature on franchising performance displays at least three other characteristic patterns. First, most studies have restricted themselves to a single sector, usually, the fast food restaurant industry, since it is often perceived and portrayed as the archetypical franchise sector. Second, existing investigations have tended to focus on a single measure of performance. Finally, with the exception of survival articles, empirical studies have typically confined themselves to cross-sectional examination of the evidence. In other words, we know very little about what fosters long term performance.

Our investigation of the correlates of performance, then, contributes to the extant literature in three specific ways. Foremost, we attempt a systematic assessment of the relative effects of a series of firm decision variables on performance. Specifically, we evaluate the impact of four categories of drivers of performance. Besides three covariates, a total of eleven hypotheses focused on drivers of performance are investigated. Second, we utilize three different operationalizations of our dependent variable, performance, in our investigation. Third and finally, we estimate our empirical models using nine years of longitudinal panel data aimed at deciphering the effects associated with our set of predictor variables using cointegration analysis, a relatively new and advanced approach to modeling equilibrium or long term relationships between economic variables in panel data. The results show that seven out of eleven hypotheses were supported by the data using the system size operationalization of performance.

Keywords. Franchising, performance, panel data, cointegration analysis

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1 Introduction

Franchising has been cited as one of the fastest growing modes of retailing in the U.S. as well as the world. Although its growing significance to the economy has attracted research attention from diverse disciplines (including management, law, economics, marketing, and finance), surprisingly fundamental knowledge gaps continue to characterize our current understanding of performance in business format franchising. Even though extant research has looked at performance in franchise systems from multiple perspectives, a definitive understanding of such a multifaceted construct has remained elusive and necessitated calls for further investigation. This paper seeks to address some of the knowledge gaps related to the construct of performance within the business format franchising sector.

The earliest studies of performance in franchise systems operationalized performance as an attitudinal construct, for which self-reported measures were collected from franchisors and/or franchisees. Hunt and Nevin (1974) and Lewis and Lambert (1991) focused on 'franchisee satisfaction'. Other researchers (e.g., Guiltinan, Rejab and Rodgers 1980; Anand and Stern 1985) have examined elements of franchisee cooperativeness. While these studies provide valuable insights into factors underlying harmonious and productive franchise relationships, they have drawn criticism for their use of attitudinal, self-reported measures of performance.

More recent studies have chosen to focus on archival data-based measures of performance in franchise systems. However, some of these studies are constrained by the industry-specific nature of their performance measures that limit comparisons across industries – for example, performance measures like 'Revenues per room' in the lodging industry (Kalnins 2004). Other studies use standardized financial metrics that can be compared across industries but involve samples limited to publicly traded companies, e.g., chain wide revenue growth (Sorenson and Sorenson 2001), return on assets and market-to-book value (Combs and Ketchen, Jr. 1999), shareholder returns (Leleux, Spinelli and Birley 2003), return on equity (Alon, Drtina and Gilbert 2004), economic value added (EVA) and market value added (MVA) (Aliouche and Schlentrich 2005). One limitation of these studies is that their samples of publicly traded franchisors tend to be a homogeneous subsection of the franchising universe, and are arguably very different from the rest of the franchising world.

Contrary to the conventional wisdom propagated in the popular press, it is not easy for new franchisors and franchisees to survive. Failure rates for these organizations are often similar (and at times exceed) the failure rates for corresponding independent businesses in the U.S. (Castrogiovanni Justis and Julian 1993, Bates 1995, Shane 1996, Lafontaine and Shaw 1998, and Holmberg and Morgan 2003) as well as in the U.K. (Stanworth et al. 1998). These trends, coupled with the limitations associated with the previously mentioned attitudinal and archival measures of franchise system performance, have made the related constructs of failure and

survival the focus of much of the extant research on franchise system performance. Studies such as those mentioned above as well as others (e.g., Bates 1998; Shane 1998a, Shane 1998b, Shane and Foo 1999, Shane 2001) have attempted to identify factors that affect the survival of new franchisors and/or franchisees.

Historically, a research agenda focused on either contrasting failure rates of independent small businesses and entrepreneurs with those of franchises and/or system survival issues was probably inevitable as this relatively novel approach to business sought to legitimize itself as a viable economic activity. The repeated comparisons with independent small businesses also reflect a common practice within franchising to position itself to downstream would-be franchisees as an entrepreneurial activity.[2] Hence, the franchising sector has consistently felt the need to showcase its superiority to the alternative of independent entrepreneurial enterprise, and the available literature on franchising performance reflects this preoccupation.

Performance, however, is more than survival. In our view, performance is also about growth. There are a number of ways to measure growth in franchise systems. However, financial measures (e.g., sales, assets) or employment numbers are not as robust measures of franchise system growth as the number of outlets in the system (Martin and Justis 1993). Blair and Lafontaine (2005) agree that growth in the number of units in business format franchise systems is a suitable proxy for the growth in business format franchising, affirming Sen's (1998) finding of a significant correlation between system outlet growth and system dollar sales growth.

Growth in franchise systems is not easily attained. Stanworth (1996) and Perrigot (2004) find that less than 50 percent of franchisors that survived continued to grow at healthy rates in the UK and France respectively. In the U.S., Blair and Lafontaine (2005, 23) find that, contrary to popular belief, growth in franchise systems has been modest and similar to that for the economy as a whole. Moreover, they find considerable variation in growth across franchise systems: in 2001, approximately 45% of franchisors operated systems with less than 50 units, and approximately 89% of franchisors operated systems with 500 or fewer units (Blair and Lafontaine 2005, 48). The findings from these studies raise the following questions: Why is it that only a small percentage of franchise systems grow to be large systems? What are the factors that influence the growth of these systems? What are the decisions that a franchisor can take to enhance this central aspect of franchise system performance?

Given the limitations associated with other measures of franchise performance and the elusiveness of system growth and success, it is not surprising that few extant studies have attempted to identify and understand drivers of franchise system growth and size. Shane (1996) analyzed data for 138 franchise systems and found

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[2] Franchisees are frequently recruited using a "be your own boss" appeal by the franchisors even though well-run franchise systems are very controlling of their franchisees for a variety of reasons like quality assurance and ensuring the standardization of the offering (Bradach 1997).

that a greater emphasis on franchising as an organizational form resulted in faster system growth. In a study that covered 109 franchisors in the restaurant sector, Sen (1998) examined the impact of increased franchising proportion and system size on the change in number of system outlets between 1986 and 1990. He, too, found a positive association between increased reliance on franchising and system growth. Castrogiovanni and Justis (2002) investigated the effects of some other strategic and contextual factors on a similar dependent variable for a sample of 246 franchise systems. Using a non-parametric approach characterized by the rank transformation of continuous independent variables prior to their inclusion in multiple regression analyses, they found two strategic factors ('franchise start up costs' and 'franchisor growth orientation') to have a significant positive impact on the percentage change in total units in a franchise network over a five period from 1993 to 1998. Significant negative effects were found for two contextual factors ('industry growth' and 'franchisor age').

Our investigation of the correlates of performance, then, contributes to the extant literature in three specific ways. First, we draw on agency theory, transaction cost analysis, resource scarcity and resource-based theories to systematically assess the relative effects of a comprehensive series of firm-level decision variables on performance. Specifically, we assess the impact of three categories of drivers of performance: (1) strategic decisions regarding firm goals (2) strategic decisions related to the marketing mix variables and (3) strategic decisions involving structure and governance of the franchise systems. Second, we evaluate the empirical models using nine years of longitudinal data from multiple industries. Third and finally, we estimate our empirical models using cointegration analysis, a relatively new and advanced approach to modeling equilibrium or long term relationships between economic variables in panel data.

2 Hypotheses

The efficient functioning of a franchise system can be hindered by the presence of franchisee free riding or ex-post franchisor moral hazard. Both of these disruptions can be curtailed through the presence of higher royalty rates in franchise contracts. These royalties provide franchisors with compensation that offsets costs associated with monitoring franchisees and enforcing contractual provisions to prevent franchisee free riding (Brickley and Dark 1987). Knott (2001) finds the involvement of the franchisor as a 'hierarchical manager' is necessary for the active enforcement of routine and the introduction of innovation in franchised units in the system. Furthermore, higher royalty rates give the franchisor a bigger stake in the performance of the franchise system and act to reduce the likelihood of ex-post franchisor opportunism (Lal 1990). Gallini and Lutz (1992) view the presence of a high royalty rate to be a signal of confidence about the product demand for the concept from the franchisor to prospective franchises. The alignment of incentives, revelation of favorable private information about product demand and

presence of chain-wide efficiencies make participation more attractive to franchisees, thereby facilitating system growth. Therefore, we expect a positive relationship between a franchisor's profit goals (as manifest in the royalty rate) and franchise system growth.

H1: *Royalty rate is positively related to franchise system growth.*

Carney and Gedajlovic (1991) find that franchisors vary in terms of the speed with which they want to grow. Castrogiovanni and Justis (2002) found a positive relation between a franchisor's growth orientation and the actual growth of its network. It seems logical, then that franchisors that seek to grow at faster rates will actually do so. Therefore:

H2: *The aggressiveness of franchisor growth goals is positively related to franchise system growth.*

Lafontaine and Shaw (1998) found the primary driver of franchisor survival to be the number of years that the franchisor has been in business before starting to franchise. The effort associated with simultaneously developing and refining a business concept as well as undertaking the recruitment of franchisees and the establishment of a franchise system can be overwhelming for franchisors. When a franchisor spends a greater amount of time developing the business concept before commencing franchising, it is often able to come up with a better franchise concept that rapidly engenders superior brand reputation and is therefore more attractive to franchisees. In addition, the franchisor is able to fully focus on the logistics of establishing a franchise system once it decides to franchise. Therefore:

H3: *Concept development time is positively related to franchise system growth.*

Consumer advertising is important for creating brand awareness. Higher levels of awareness among end-users can create enhanced demand for a larger network of units. High brand equity becomes a resource valued by prospective franchisees (Combs and Ketchen, Jr. 1999). In addition, this brand equity creates safeguards against ex-post opportunistic behavior by the franchisor. These two factors make franchise systems with high levels of consumer advertising more attractive to prospective franchisees. Therefore:

H4: *The level of consumer advertising is positively related to franchise system growth.*

Extant research on franchise system growth (e.g., Shane 1996; Sen 1999) has found a positive relation between the extent of franchising used by a franchisor and franchise system growth. This result is consistent with the resource scarcity view that franchising allows a franchisor to overcome capital, informational and

managerial constraints and grow rapidly (Norton 1988). However, the signaling-based agency theory literature (Gallini and Lutz 1992) suggests the opposite: a franchisor is expected to signal favorable private information about product demand to prospective franchisees through a higher proportion of company-owned outlets. Therefore, we have competing hypotheses:

H5a: *The proportion of franchised outlets is positively related to franchise system growth.*

and alternatively,

H5b: *The proportion of company-owned outlets is positively related to franchise system growth.*

In recent years, franchisors have incorporated a number of growth initiatives into their adoption of franchising. These include the use of multi-unit franchising (in the form of area development agreements, sub-franchising or territorial expansion) and allowing for conversion. Multi-unit franchising promotes system growth by enabling franchisors to overcome resource scarcity and adverse selection problems (Kaufmann and Dant 1996; Norton 1988). In addition it allows franchisees to internalize externalities and reduce spillover effects (Kalnins and Lafontaine 1996). Finally, Bercovitz (2002) notes that multi-unit franchising enhances the downstream rent potential for franchisees, thereby creating the front-end of self-enforcing agreements (Klein 1980). The subsequent alignment of incentives, lowering of agency costs and reduction of the likelihood of the use of contractually-specified disciplinary devices increases the attractiveness of the franchise system to prospective franchisees.

Conversion franchising entails the recruitment of franchisees from other chains and franchise systems. Franchisors who are successful in using conversion franchising acquire experienced franchisees that 'hit the ground running' and facilitate system growth.

H6: *The number of franchisor growth initiatives is positively related to franchise system growth.*

Franchisors perform a number of tasks that directly and indirectly support franchisees, facilitating their success and the consequent growth of the franchise system. These include the exercise of rigor in selecting new franchisees, the provision of initial assistance to these franchisees and of ongoing services to all franchisees. These activities enhance brand equity for the system and mitigate adverse selection, thereby creating incentives for high quality franchisees to join and grow the system. Therefore:

H7: *The extent of assistance provided by the franchisor to new franchisees is positively related to franchise system growth.*

H8: *The extent of rigor used by the franchisor to select new franchisees is positively related to franchise system growth.*

H9: *The extent of ongoing services provided by the franchisor to all franchisees is positively related to franchise system growth.*

Some franchisors allow for passive ownership on the part of franchisees. Although this practice creates an additional layer of hierarchy and agency costs within the system, it does expand the pool of prospective franchisees, and contribute to the faster growth in the system size. Therefore:

H10: *The extent of use of passive ownership is positively related to franchise system growth.*

In addition to these eleven hypotheses, we also investigate the effects of three covariates on the outcome measure of system growth. Two of these covariates (namely, age and size of the organization in question) are commonly used in most inter-organizational research for control purposes since they are expected to impact various theoretically vested relationships in systemic fashion. The third covariate, *proportion of units in the U.S.*, is unique to the context at hand in that franchising has its genesis in the U.S., and therefore its domestic proportion may have some systemic effects on the system growth.

3 Data Characteristics

We tested our 11 hypotheses using secondary data drawn from Bond's Franchise Guides from 1985 to 2004 (i.e., sixteen years of data as there were no Guides for years 1986, 1987, 1990 and 2000). However, in a tradeoff involving the number of years of data and the list-wise sample size across those years for the variables of interest, we finally settled on the years 1995 through 2004 (i.e., nine years) with annual sample size of N=76. Consequently, the cointegration analysis, the principal inferential statistical technique utilized, is based on panel data with N = 684 (9 years x 76) cases.

We employ three different measures of *franchise system growth*, our dependent measure. Our primary measure of performance – the total number of franchised and company owned outlets – is in keeping with previous literature on the subject (Shane 1996; Sen 1998; and Castrogiovanni and Justis 2002). In addition, we include two secondary measures of performance: (1) breadth of system distribution (i.e., total number of states and Canadian provinces covered by the system), and (2) depth of system distribution (i.e., total number of outlets operating in the top three states and/or Canadian provinces).

We present the details of operationalizations of our variables in the Appendix and Table 1 presents the descriptive statistics related to our measured variables.

Table 1. Descriptive Statistics: Means and Standard Deviations (N=684)

Variables	Mean	Standard Deviation
H1: Goals: Profits (On Going Royalty Rate)	5.91	4.42
H2: Goals: Rapid Addition of New Outlets (Projected New Units to be Opened)	22.18	25.57
H3: Strategy: Concept Development Time (Gap Between System Establishment & First Franchise Sale in Years)	5.61	8.85
H4: Strategy: Consumer Advertising (On Going Advertising Fee Rate)	1.53	1.60
H5a, H5b: Strategy: Signaling Through Company Units (Proportion of Company Owned Outlets)	11.34	18.58
H6: Strategy: Franchise Growth Initiatives (Sum of 4 Initiatives, e.g., Area Development, Sub Franchising)	2.29	1.00
H7: Strategy: Franchisee Assistances Package (Sum of 4 Assistances Extended to New Recruits, e.g., Financial & Site Selection Assistance)	2.88	1.02
H8: Strategy: Franchisee Selectivity Rigor (Sum of Importance Ratings of 6 Franchisee Attributes, e.g., Financial Net Worth, Education)	19.84	3.58
H9: Strategy: Good Citizenship Behavior (Sum of 9 Ongoing Services Provided to Franchisees, e.g., Central Data Processing & Purchasing)	6.71	1.35
H10: Strategy: Provision of Passive Ownership (Whether or Not Passive Ownership is Permitted)	1.87	0.65
Covariate 1 Age of Franchising (Current Year Minus First Franchise Sale Year)	24.38	10.70
Covariate 2 Size of the Franchisor Organization	37.33	60.88
Covariate 3 Proportion of Units in the U.S.	79.73	33.91
Dependent Variable 1: System Size (Total Franchised Units + Total Company Units)	196.62	226.98
Dependent Variable 2: Breadth of Distribution (Count of Total Number of States and Provinces Covered by the System)	20.70	17.25
Dependent Variable 3: Depth of Distribution (Total Number of Outlets Operating in Top Three States and/or Provinces)	74.78	91.91

4 Analysis and Results

4.1 Introduction to Cointegration Analysis

Traditionally, econometric analysis has consisted of cross-sectional analysis, time series analysis, or panel data analysis with a small and fixed time series dimension. In recent years there has been a growing interest in studying cross-sectional data over time, i.e., using panel time series data. Panel time series analysis considers the issues involved when the panel has a large cross-section dimension and a large time series dimension. When working with nonstationary panel time series data, we must deal with the nonstationary data from the time series but we gain additional power from the increased data from the cross-section dimension.

Recent research has improved our ability to analyze nonstationarity, the spurious regression problem, and cointegration in panel data. These issues have been studied extensively in pure time series, but only recently have these issues been studied in detail in panel data. The methods used in panel time series analysis are extensions of the traditional time series methodology, using the additional information gained from the cross-section dimension of the panel.

As when doing traditional time series analysis, we first test for nonstationarity (panel unit root). If we find that the panel is nonstationary, we must avoid the spurious regression problem. To do this, we test for panel cointegration (Engle and Granger 1987). If the tests indicate a cointegration relationship between the nonstationary variables, we can then go ahead and estimate this long run relationship.

4.2 Cointegration Analysis[3]

All panel estimation and inference was carried out using the software program NPT 1.0 and GAUSS 5.0. In order to consider the issue of panel cointegration, we first test for a panel unit root in each of the data series. We use the panel unit root tests suggested by Harris and Tzavalis (1999) under the fixed time dimension. We begin with the Harris and Tzavalis (1999) model 1a: $y_{it} = \varphi y_{it-1} + v_{it}$. When testing for a panel unit root, the null hypothesis is that there is a panel unit root, i.e., the data series is nonstationary. We do not reject the null hypothesis for all data series at the 5% significance level, except H2, H4, H5, and D3 (i.e., Dependent Variable 3, namely, Depth of Distribution). Thus, it appears that H2, H4, H5, and D3 are stationary data series, while H1, H3, H6, H7, H8, H9, H10, C1 (i.e., Covariate 1 or age), C2 (i.e., Covariate 2 or size), C3 (i.e., Covariate 3 or proportion of units in

[3] For this data set the time dimension is T = 9 and the cross section dimension is N = 76. This is a very small time dimension for this type of analysis. In fact, it is not possible to estimate the models under a heterogeneous covariance structure. We must assume that the covariance structure is homogeneous.

the U.S.), D1 (i.e., Dependent Variable 1 or System Size) and D2 (i.e., Dependent Variable 2 or Breadth of Distribution) are nonstationary data series.

Since we found nonstationary dependent and independent variables for the dependent variables D1 and D2, we must test for panel cointegration among these nonstationary variables. Note that it does not make sense to consider the variable D3 as a dependent variable in this case since the regression would not make sense with D3 stationary and nonstationary independent variables. We tested for panel cointegration using the tests proposed by Kao (1999). When testing for panel cointegration, the null hypothesis is that the estimated equation is not cointegrated. We reject the null hypothesis in each of these two equations (dependent variables D1 and D2). The largest p-value for all of the panel cointegration tests considered is 0.0067.

Since we found that the estimated equations are cointegrated, we next estimate the cointegration relationships using OLS (Tables 2, 3 and 4, for respectively, D1, D2 and D3) and bias-corrected OLS (Tables 5 and 6, for respectively, D1 and D2).[4] Since the equations contain nonstationary and stationary regressors, care must be taken in calculating t-statistics. In order to calculate the t-statistics correctly, NPT 1.0 was modified to adjust the speeds of convergence for the stationary regressors. Kao and Chiang (2000) show that "the OLS estimator has non-negligible bias in finite samples." Therefore, we also present the bias-corrected OLS results for these regressions.

Finally, for comparison, we repeated the preceding analysis beginning with model 1b of Harris and Tzavalis (1999): $y_{it} = \alpha_i + \varphi y_{it-1} + v_{it}$. In this setup, we reject the null hypothesis that the data series are nonstationary, for all variables except C1 (i.e., Covariate 1 or age). This implies that we can estimate the model using traditional OLS. Note that if we include C1 in the regressions, we cannot rely on the corresponding t-statistic, which will diverge. Even so, the coefficient on C1 is not significant in any of the models. Since all variables are stationary, OLS estimates are not biased. Therefore, we report traditional OLS results for all three equations.

4.3 Summary of Results

Foremost, we find remarkable consistency in the results based on the OLS and the Bias Corrected OLS results. In fact, only three changes occur. On the other hand, there is considerable variation in results across the three operationalizations of our outcome measure, system growth. In rank order, in terms of Adjusted R**2** values, they were:

[4] Bias corrected OLS results for D3 (i.e., Dependent Variable of Depth of Distribution) are not presented because the basic traditional OLS model was non-significant (Table 4).

Table 2. OLS Results: Dependent Variable Operationalization: System Size

Predictors		**β**	**p-value**
Goals: Profits (On Going Royalty Rate)	**H1**	7.75	**0.000**
Goals: Rapid Addition of New Outlets (Projected New Units to be Opened)	**H2**	-0.07	0.296
Strategy: Concept Development Time (Gap Between System Establishment & First Franchise Sale in Years)	**H3**	2.93	**0.002**
Strategy: Consumer Advertising (On Going Advertising Fee Rate)	**H4**	-0.35	0.431
Strategy: Signaling Through Company Units (Proportion of Company Owned Outlets)	**H5b**	1.70	**0.045**
Strategy: Franchise Growth Initiatives (Sum of 4 Initiatives, e.g., Area Development, Sub Franchising)	**H6**	34.15	**0.000**
Strategy: Franchisee Assistances Package (Sum of 4 Assistances Extended to New Recruits, e.g., Financial & Site Selection Assistance)	**H7**	4.50	0.068
Strategy: Franchisee Selectivity Rigor (Sum of Importance Ratings of 6 Franchisee Attributes, e.g., Financial Net Worth, Education)	**H8**	31.65	**0.000**
Strategy: Good Citizenship Behavior (Sum of 9 Ongoing Services Provided to Franchisees, e.g., Central Data Processing & Purchasing)	**H9**	6.83	**0.000**
Strategy: Provision of Passive Ownership (Whether or Not Passive Ownership is Permitted)	**H10**	9.64	**0.023**
Covariate 1 Age of Franchising (Current Year Minus First Franchise Sale Year)	**C1**	-1.43	0.110
Covariate 2 Size of the Franchisor Organization	**C2**	1.16	**0.000**
Covariate 3 Proportion of Units in the U.S.	**C3**	-1.29	**0.000**
R Square = 0.5232, Adjusted R Square = 0.5139; F (13,670) = 56.5539, p-value = 0.0000			

Note: System Size = Total Franchised Units + Total Company Units in the System

Table 3. OLS Results: Dependent Variable Operationalization: Breadth of Distribution

Predictors		**β**	**p-value**
Goals: Profits (On Going Royalty Rate)	**H1**	0.25	0.069
Goals: Rapid Addition of New Outlets (Projected New Units to be Opened)	**H2**	0.04	**0.000**
Strategy: Concept Development Time (Gap Between System Establishment & First Franchise Sale in Years)	**H3**	0.05	0.290
Strategy: Consumer Advertising (On Going Advertising Fee Rate)	**H4**	0.05	0.409
Strategy: Signaling Through Company Units (Proportion of Company Owned Outlets)	**H5b**	0.07	**0.006**
Strategy: Franchise Growth Initiatives (Sum of 4 Initiatives, e.g., Area Development, Sub Franchising)	**H6**	0.31	0.305
Strategy: Franchisee Assistances Package (Sum of 4 Assistances Extended to New Recruits, e.g., Financial & Site Selection Assistance)	**H7**	0.07	0.404
Strategy: Franchisee Selectivity Rigor (Sum of Importance Ratings of 6 Franchisee Attributes, e.g., Financial Net Worth, Education)	**H8**	1.31	**0.000**
Strategy: Good Citizenship Behavior (Sum of 9 Ongoing Services Provided to Franchisees, e.g., Central Data Processing & Purchasing)	**H9**	-0.12	0.265
Strategy: Provision of Passive Ownership (Whether or Not Passive Ownership is Permitted)	**H10**	0.30	0.263
Covariate 1 Age of Franchising (Current Year Minus First Franchise Sale Year)	**C1**	-0.03	0.380
Covariate 2 Size of the Franchisor Organization	**C2**	0.02	**0.046**
Covariate 3 Proportion of Units in the U.S.	**C3**	0.02	0.108
R Square = 0.1740, Adjusted R Square = 0.1580; F (13,670) = 10.8568, p-value = 0.0000			

Note: Breadth of Distribution=Count of Total Number of States and Canadian Provinces Covered by the System

Table 4. OLS Results: Dependent Variable Operationalization: Depth of Distribution

Predictors		**β**	**p-value**
Goals: Profits (On Going Royalty Rate)	**H1**	1.38	0.313
Goals: Rapid Addition of New Outlets (Projected New Units to be Opened)	**H2**	0.03	0.445
Strategy: Concept Development Time (Gap Between System Establishment & First Franchise Sale in Years)	**H3**	0.70	0.337
Strategy: Consumer Advertising (On Going Advertising Fee Rate)	**H4**	3.86	0.128
Strategy: Signaling Through Company Units (Proportion of Company Owned Outlets)	**H5b**	-0.57	0.113
Strategy: Franchise Growth Initiatives (Sum of 4 Initiatives, e.g., Area Development, Sub Franchising)	**H6**	5.58	0.294
Strategy: Franchisee Assistances Package (Sum of 4 Assistances Extended to New Recruits, e.g., Financial & Site Selection Assistance)	**H7**	0.50	0.455
Strategy: Franchisee Selectivity Rigor (Sum of Importance Ratings of 6 Franchisee Attributes, e.g., Financial Net Worth, Education)	**H8**	7.90	**0.019**
Strategy: Good Citizenship Behavior (Sum of 9 Ongoing Services Provided to Franchisees, e.g., Central Data Processing & Purchasing)	**H9**	-0.83	0.401
Strategy: Provision of Passive Ownership (Whether or Not Passive Ownership is Permitted)	**H10**	0.02	0.499
Covariate 1 Age of Franchising (Current Year Minus First Franchise Sale Year)	**C1**	-0.92	0.319
Covariate 2 Size of the Franchisor Organization	**C2**	0.35	**0.039**
Covariate 3 Proportion of Units in the U.S.	**C3**	-0.21	0.249
R Square = 0.0307, Adjusted R Square = 0.0120; F (13,670) = 1.6323, p-value = 0.0717			

Note: Depth of Distribution=Total Number of Outlets Operating in Top Three States and Canadian Provinces

Table 5. Bias Corrected OLS Results: Dependent Variable Operationalization: System Size

Predictors		**β**	**p-value**
Goals: Profits (On Going Royalty Rate)	**H1**	11.40	**0.000**
Goals: Rapid Addition of New Outlets (Projected New Units to be Opened)	**H2**	-0.12	0.328
Strategy: Concept Development Time (Gap Between System Establishment & First Franchise Sale in Years)	**H3**	2.82	**0.008**
Strategy: Consumer Advertising (On Going Advertising Fee Rate)	**H4**	-0.01	0.466
Strategy: Signaling Through Company Units (Proportion of Company Owned Outlets)	**H5b**	1.07	**0.018**
Strategy: Franchise Growth Initiatives (Sum of 4 Initiatives, e.g., Area Development, Sub Franchising)	**H6**	33.00	**0.000**
Strategy: Franchisee Assistances Package (Sum of 4 Assistances Extended to New Recruits, e.g., Financial & Site Selection Assistance)	**H7**	0.60	0.425
Strategy: Franchisee Selectivity Rigor (Sum of Importance Ratings of 6 Franchisee Attributes, e.g., Financial Net Worth, Education)	**H8**	39.37	**0.000**
Strategy: Good Citizenship Behavior (Sum of 9 Ongoing Services Provided to Franchisees, e.g., Central Data Processing & Purchasing)	**H9**	7.30	**0.000**
Strategy: Provision of Passive Ownership (Whether or Not Passive Ownership is Permitted)	**H10**	10.38	**0.038**
Covariate 1 Age of Franchising (Current Year Minus First Franchise Sale Year)	**C1**	-0.95	0.245
Covariate 2 Size of the Franchisor Organization	**C2**	1.30	**0.000**
Covariate 3 Proportion of Units in the U.S.	**C3**	-1.60	**0.000**
R Square = 0.5232, Adjusted R Square = 0.4947; F (13,670) = 56.5539, p-value = 0.0000			

Note: System Size = Total Franchised Units + Total Company Units in the System

Table 6. Bias Corrected OLS Results: Dependent Variable

Predictors		**β**	**p-value**
Goals: Profits (On Going Royalty Rate)	**H1**	0.21	**0.030**
Goals: Rapid Addition of New Outlets (Projected New Units to be Opened)	**H2**	0.04	0.102
Strategy: Concept Development Time (Gap Between System Establishment & First Franchise Sale in Years)	**H3**	-0.01	**0.461**
Strategy: Consumer Advertising (On Going Advertising Fee Rate)	**H4**	0.01	0.446
Strategy: Signaling Through Company Units (Proportion of Company Owned Outlets)	**H5b**	0.06	0.264
Strategy: Franchise Growth Initiatives (Sum of 4 Initiatives, e.g., Area Development, Sub Franchising)	**H6**	0.20	0.345
Strategy: Franchisee Assistances Package (Sum of 4 Assistances Extended to New Recruits, e.g., Financial & Site Selection Assistance)	**H7**	0.11	0.338
Strategy: Franchisee Selectivity Rigor (Sum of Importance Ratings of 6 Franchisee Attributes, e.g., Financial Net Worth, Education)	**H8**	1.32	**0.000**
Strategy: Good Citizenship Behavior (Sum of 9 Ongoing Services Provided to Franchisees, e.g., Central Data Processing & Purchasing)	**H9**	-0.18	0.114
Strategy: Provision of Passive Ownership (Whether or Not Passive Ownership is Permitted)	**H10**	0.18	0.331
Covariate 1 Age of Franchising (Current Year Minus First Franchise Sale Year)	**C1**	0.01	0.479
Covariate 2 Size of the Franchisor Organization	**C2**	0.02	**0.011**
Covariate 3 Proportion of Units in the U.S.	**C3**	0.04	**0.008**
R Square = 0.1740, Adjusted R Square = 0.1554; F (13,670) = 10.8568, p-value = 0.0000			

Note: Breadth of Distribution=Count of Total Number of States and Canadian Provinces Covered by the System

1. System Size (OLS Adjusted R2 =0.51; p-value =0.0000)
2. Breadth of Distribution (OLS Adjusted R2 =0.16; p-value =0.0000)
3. Depth of Distribution (OLS Adjusted R2 =0.01; p-value = 0.0717)

In System Size operationalization, the results are identical in terms of significant effects across OLS and Bias Corrected OLS runs (compare Tables 2 and Table 5). In both Tables, we find support for 7 out of 11 hypotheses (i.e., H1, H3, H5b, H6, H8, H9 and H10) both directionally and in terms of significance criterion. Only H2 (Goal of Rapid Addition of Outlets), H4 (Strategy of Consumer Advertising), H5a (the resource scarcity theory interpretation of the effect of the proportion of franchised outlets), and H7 (Strategy of Franchisee Assistances Package) were statistically non-significant. Two of three covariates (i.e., Size of Franchisor Organization, and Proportion of Units in the U.S.) were also significant; however, covariate Age of Franchising was not significant. In terms of direction of effects, there was one surprise: Covariate 3 (Proportion of Units in the U.S.) had a negative β coefficient. It appears that a preponderance of U.S. units does not help the system size growth. In other words, expansion into international markets was an important driver of system growth.

As regards the results associated with Breadth of Distribution operationalization of our dependent variable, only 2 of 11 hypotheses received statistical support at $p<0.05$ level using the Bias Corrected OLS results[5] (see Table 6), namely, H1 (Goal of Profits), and H8 (Strategy of Franchisee Selectivity Rigor). In addition, the covariates of the Size of Franchisor Organization and Proportion of Units in the U.S. were significant at the 0.05 level. In addition, H2 (Goal of Rapid Addition of Outlets) was significant at the $p<0.10$ level. This time the significant effect of Covariate 3 (Proportion of Units in the U.S.) was positive, hence, directionally correct.

As regards the Depth of Distribution operationalization, the results are not meaningfully interpretable given the small Adjusted R**2** associated with this operationalization of performance and the overall regression model being non-significant.

5 Conclusions

Our results have important implications for franchising practice and research, and we identify a number of issues that merit further research.

What can a franchisor do to enhance system size growth? Although conventional wisdom highlights the pioneering advantage for first movers, our results suggest that a franchisor needs to guard against rushing prematurely into the market and give itself enough time to refine their franchise concept. The franchisor

[5] The pattern of effects is somewhat different if we examine the basic OLS results presented in Table 3.

can boost system growth by signaling quality and commitment through the royalty rate and proportion of company-owned outlets. Growth is also facilitated when the franchisor recruits high quality franchisees by establishing rigorous criteria for qualifying franchisees. Finally, growth is accelerated when the franchisor (a) allows passive ownership, (b) implements policies that assist franchisee growth (e.g., area development agreements, multi-unit franchising) and (c) provides a number of ongoing services to franchisees.

We make a number of contributions to research in franchising. In contrast to extant research, we use longitudinal panel data and rigorous cointegration analysis to systematically investigate the effects of a comprehensive set of firm-level decision variables on multiple measures of performance. Our results provide considerable support for signaling theories in franchising – signals of franchisor commitment and quality like a higher royalty rate and higher proportions of company owned outlets are associated with greater system growth. In contrast, resource scarcity-based explanations for system growth are not supported – a higher proportion of franchised outlets does not result in faster system growth even though this rapid growth is positively associated with resource-intensive expansion into international markets and having a lower proportion of U.S. based outlets.

Our results highlight a number of opportunities for future research. One avenue is the reconciliation of our results with those of Shane (1996) and Sen (1998) regarding the reliance on franchising as an organizational form and system size. The work of Bradach (1997) suggests nonlinearities and an optimal proportion of franchised outlets for maximizing growth and performance. Although we investigated multiple measures of performance, our models were most successful in explaining total system size. Identifying key drivers of the other facets of franchisor growth and performance – the depth and breadth of distribution – provides another opportunity for future research.

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Appendix: Operationalization of Variables

Predictors	**Operationalizations**	
Goals: Profits	H1	On Going Royalty Rate
Goals: Rapid Addition of New Outlets	H2	Projected New Units to be Opened
Strategy: Concept Development Time	H3	Gap Between System Establishment & First Franchise Sale in Years
Strategy: Consumer Advertising	H4	On Going Advertising Fee Rate
Strategy: Signaling Through Company Units	H5a H5b	Proportion of Company Owned Outlets
Strategy: Franchise Growth Initiatives	H6	Summation of Number of Yeses On Area Development Permitted? Sub Franchising Permitted? Expansion in Territory Permitted? Conversions Permitted? (Yes = 1, No = 0)
Strategy: Franchisee Assistances Package	H7	Summation of Number of Yeses On Financial Assistance Available? Site Selection Help Available? Lease Negotiation Help Available? Co-Operative Advertising Available? (Yes = 1, No = 0)
Strategy: Franchisee Selectivity Rigor	H8	Summation of Importance Ratings of Financial Net Worth? General Business Experience? Specific Industry Experience? Formal Education? Psychological Profile? Personal Interview? (Unimportant=1, Very Important=5)
Strategy: Good Citizenship Behavior	H9	Summation of Number of Yeses on Nine Ongoing Services Provided to Franchisees Central Data Processing? Central Purchasing? Field Operations Evaluation? Field Training? Initial Store Opening? Inventory Control? Franchisee Newsletter? Regional or National Meetings? 800 Telephone Hotline? (Yes = 1, No = 0)
Strategy: Provision of Passive Ownership	H10	Whether or Not Passive Ownership is Permitted? Score on 3 Point Scale: Not Allowed = 1 Discouraged = 2 Allowed = 3

Appendix: Operationalization of Variables (Continued)

Covariate 1: Age of Franchising	Current Year Minus First Franchise Sale Year
Covariate 2: Size of the Franchisor Organization	Size of Corporate (Franchisor) Staff
Covariate 3: Proportion of Units in the U.S.	Count of U.S. Outlets Relative to Total Units
Dependent Variable 1: System Size	Total Franchised Units + Total Company Units in the System
Dependent Variable 2: Breadth of Distribution	Count of Total Number of States and Canadian Provinces Covered by the System
Dependent Variable 3: Depth of Distribution	Total Number of Outlets Operating in Top Three States and/or Canadian Provinces

Franchised Network Efficiency: A DEA Application to US Networks

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Abstract. The concept of performance has been little explored in the franchising literature. In this paper, we explore the franchising network performance, and more specifically the franchising network efficiency, from the franchisor point of view and through a DEA approach (Data Envelopment Analysis) Two main indicators of the franchisor revenues are used: the on-going franchising royalties and the franchising fee. The purpose of this paper is built into an efficiency perspective. Data concern the first 150 franchising networks of the Entrepreneur's 25 Annual Franchise 500® ranking (2004). The findings indicate that most of the networks are under-efficient and one of the main reasons for this stems from scale efficiency. A particular network is also studied in depth. Moreover, four hypotheses are empirically tested. Implications of the study are finally discussed.

Keywords. Franchising, efficiency, performance, US networks

1 Introduction

The widespread use of franchising agreements has increased over the last few years, it being one of the most visible globalization dynamics in the market. Its economic importance highlights the need for researchers to accumulate new contributions in order to enlarge the franchising literature and help the franchising entrepreneurs - franchisors and franchisees - in their managerial and strategic decisions (Kaufman and Dant, 1998).

Moreover, there is some evidence that entering and exiting the franchising industry is a common feature of the franchisors (Lafontaine and Shaw, 1998; Shane

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and Foo, 1999). This underlines the fact that competition in the franchising sector is high and, therefore, efficiency is without doubt a relevant characteristic of this sub-field of retailing. Indeed, competition is traditionally associated with efficiency (Jones *et al.* 1990).

Researchers are increasingly analyzing the franchising industry because of its novelty and the various theoretical approaches. Nevertheless, franchising performance remains under-explored (Combs *et al.* 2004; Watson *et al.* 2005). Yet, the efficiency analysis is an established area in the retailing research (Donthu and Yoo 1998; Barros and Alves 2003, 2004; Barros 2005) which has not yet been extended to franchising, despite the traditional ranking of the franchising networks published by the Entrepreneur Magazine (Clarkin *et al.* 2002).

The main contribution of this paper consists of applying DEA -Data Envelopment Analysis- frontier model to the franchising sector, using a population of 150 franchising networks whose data are published in the Entrepreneur's 25 Annual Franchise 500® (2004). The estimation of efficiency scores allows a new ranking of the franchising networks. We are aware of very few papers using the frontier models to analyze franchising decisions at the network level (Briec and Cliquet 1999; Perrigot and Cliquet 2003). The main applications of DEA in the franchising research have dealt with the comparison of franchised unit efficiency and non-franchised unit efficiency (Anderson *et al.* 1998; Yoo *et al.* 1998).

DEA was actually first developed by Farrell (1957) and deepened by Charnes, Cooper and Rhodes (1978) as a non-parametric procedure that compares a Decision-Making Unit (DMU) with an efficient frontier using performance indicators. DEA is particularly appropriate in the cases of multiple inputs converted into multiple outputs and of a small number of observations that prevents a parametric analysis. DEA is a linear programming technique that enables the managers to benchmark the best-practice DMUs (in the present research: the franchising networks with the best practices in terms of management procedures). Furthermore, DEA provides estimations of potential improvements for inefficient DMUs. Throughout this paper, we shall assume that the reader has some knowledge of the DEA methodology. Readers not familiar with DEA are referred to Charnes *et al.* (1995), Coelli, Rao and Batesse (1998), Coelli (1996), Cooper *et al.* (2000) and Thanassoulis (2001).

The paper is organized as follows. In Section 2, the franchising development and the lack of research dealing with the concept of performance in the franchising industry are highlighted. In section 3, the Data Envelopment Analysis methodology and the population of the franchising networks analyzed in the empirical study are described. In sections 4 and 5, we successively indicate and discuss the results of this study. In section 6, the limitations and tracks for future research are indicated. And finally, section 7 presents the general conclusion.

2 Franchising Network Performance

2.1 A Definition and an Overview of the Importance of Franchising

A franchising agreement is defined as a contractual arrangement between two independent firms, whereby the franchisee pays to the franchisor the right to sell the franchisor products or services and/or the right to use his/her trademark at a given place and for a certain period of time.

Following the globalization phenomenon, the number of franchise agreements has considerably increased over time. For instance, all the contemporary malls or the main streets of the city centers, whatever the country – developed or emerging, are now populated by almost the same brands: Mc Donald's, Subway, Century 21, Seven Eleven, etc. The brand products and/or services are everywhere offered in a seemingly equal form, establishing brand homogeneity from the consumer viewpoint.

Table 1 underlines the importance of franchising industry in the world displaying the number of franchisors and franchisees in various countries.

Table 1. Franchising in the World (World Franchise Council, 2004)

Countries	Number of franchisors	Number of franchisees
Australia	720	50000
Austria	330	4700
Belgium	100	3500
Brazil	900	19000
Canada	850	80000
China	1900	87000
Finlande	177	3700
France	765	34745
Germany	760	41000
Great-Britain	695	33800
Greece	430	6540
Hong-Kong	92	3000
Italia	650	40000
Japan	1100	220000
Mexico	550	28000
Netherlands	475	18500
New Zealand	350	4217
Singapore	380	3000
Slovenia	106	980
South Africa	391	22895
Sweden	400	18000
Switzerland	180	-
USA	1500	760000

In the United States, sales from business format franchising (restaurants, dry cleaners, etc.) and sales from product franchises (gas stations, soda bottlers, etc.) accounts for more than 40% of all retail sales (International Franchise Association, 2004). And, in some sectors, franchising networks are particularly powerful as far as their sales are concerned: printing and copying (71% of sales), tax preparation (67% of sales), speciality food retailing (55%), restaurants (46% of sales), etc. (Combs *et al.* 2004). In the United States, franchising accounts for about $1 trillion in annual retail sales for approximately 320,000 businesses in 75 industries (Dant and Kaufman 2003). And, franchising business, concerning one out of twelve retail establishments, now employs near ten million people in the United States (Alon 2004).

Commensurate with its economic importance and its omnipresent worldwide development, franchising has not surprisingly caught the attention of researchers from various fields such as entrepreneurship (Shane and Hoy 1996), marketing (Kaufmann and Rangan 1990), economics (Lafontaine 1992), strategic management (Combs and Ketchen 1999), law, finance, etc. (See Combs *et al.* (2004) for more details).

2.2 Franchising and Performance

The franchising literature has mainly focused on the motivations for franchising (Oxenfeldt and Kelly 1968; Caves and Murphy 1976; Norton 1988; Dant *et al.* 1996), the relative failure rates of franchises compared with those of small businesses (Castrogiovanni *et al.* 1993; Stern and Stanworth 1994; Bates 1995a; 1995b; Stanworth *et al.* 1998) and the plural form development (Bradach 1997; 1998; Cliquet 2000a; Dant and Kaufman 2003).

Nevertheless, the concept of performance has been little explored in the franchising literature (Combs *et al.* 2004; Watson *et al.* 2005). Two reasons for this under-investigation were underlined by Combs *et al.* (2004). Firstly, at the empirical level, data availability constitutes a real problem. Indeed, data on network performance are difficult to collect. Secondly, at the theoretical level, the main theories used in franchising research, i.e. agency theory and resource scarcity, have not really focused on financial performance.

The first aim of this paper is to explore the franchising network performance from the franchisor point of view, and more specifically, the franchisor revenues. Two main sources of the franchisor revenues can be studied: the franchising royalties and the franchising fee, both of them paid by the franchisees to his/her franchisor as defined in the franchising contract.

The franchising royalties usually correspond to a constant percentage of the franchised unit sales. They are monthly or annually paid. The franchising fee is paid only once at the beginning of the franchising contract, when a new franchisee integrates the network. These two indicators of the franchisor revenues are usually the same for all the franchisees joining the network at a same period of time. They are displayed in public data sources such as franchising directories, or available from the franchisors under request.

In the franchising literature, the franchising royalties and the franchising fee have been explored in three main perspectives: their evolution with the franchisor experience acquisition, their determinants and the links that can exist between them.

First, Lafontaine and Shaw (1999) found that, contrary to the predictions from some specific theoretical models (Rubin 1978; Mathewson and Winter 1985; Gallini and Lutz 1992), franchisors do not systematically increase or decrease their royalty rates or franchising fees as they become better established. These authors concluded that the variation in the franchising contract terms is more determined by differences across firms than by within-firm changes over time. Further, their empirical study also showed that once the terms of the contract were set by the franchisor at the birth of his/her network, they changed very little over time.

Second, regression models and more precisely maximum likelihood Tobit estimator were used under both a linear and a partially logarithmic specification in order to highlight the determinants of franchising royalties on the one hand and franchise fee on the other hand (Lafontaine 1992). In summary, empirical models appeared more successful at explaining the franchised proportion of the network than at explaining the terms of the franchising contract such as royalty rate and franchising fee. Very few variables significantly contribute to explain these two indicators. Network age surprisingly had a negative impact on the royalty rate (Lafontaine 1992, 279).

Third, research works of Lafontaine (1992) and Lafontaine and Shaw (1999) contradicted one of the main data patterns suggested by theoretical models of franchising such as one- and two-sided moral hazard models, namely that franchising fees and royalty rates should be negatively related.

As we can know, franchising royalties and franchising fee have not been explored into an efficiency perspective. Besides, frontier models seem not to have been used in franchising literature, except by Briec and Cliquet (1999) and Cliquet and Perrigot (2003). Yet, efficiency appears relevant to analyze the franchisor revenues compared to his/her investments. How the franchisor can optimize his/her resource allocation?

Thus, the precise purpose of this paper is to analyze the franchising network performance into an efficiency perspective through the Data Envelopment Analysis methodology. The franchisor efficiency, or symmetrically the franchising network efficiency, is studied using several indicators of the network and the franchising contract.

In order to complete this study, we also explore several hypotheses linked to the main characteristics of the network.

Network size and dynamism of the franchising network members enable an increase in the level of efficiency. Indeed, large networks can be characterized by economies of scale (Huszagh *et al.* 1992), financial capital, brand name recognition (Aydin and Kacker 1990), market power (Huszagh *et al.* 1992), etc. The cost per unit becomes lower as the number of units increases due to economies of scale throughout the network. Savings are realizable in such areas as purchasing, promotion, R&D monitoring, quality control, and because of the centralization of services like advertising and product development. The number of units in a franchis-

ing network directly affects the financial resource base of the network, overall ongoing royalty income, brand name recognition and the resources of a network through both cost savings and income generation. Additionally, the dynamism within a network is generally associated to that of the franchisees. These are independent business people and invest their money, their time and their energy in the unit management. They will work in order to optimize the resource allocation within their own unit. And then, they will tend to target the efficiency level for their franchised unit.

From these key elements, size and specifically size associated to the franchised part of the networks, a first hypothesis can be formulated.

H1: Franchising networks with many franchised units are more efficient than franchising networks with a few franchised units.

A successful franchisor-franchisee relationship enables a higher level of performance (Brown and Dev 1997). Indeed, in the franchising business, franchisors and franchisees are involved in complex exchanges, they behave like partners. These partnerships are longer term, more personal, and more intertwined than discrete exchanges. They are characterized by explicit contracts: the franchising contracts. Three elements of these contracts: duration, requirements in terms of investments and cash liquidity seem very important to create and maintain a positive environment for the franchisor/franchisee relationship. In the franchisor perspective, working closely with the franchisees is very important to increase the network performance. According to Brown and Dev (1997), franchisors should view the relationship with the franchisees as important in and of itself and should genuinely strive to preserve this relationship.

Long term contracts enable people, in both: the network headquarters and the franchised unit, to develop personal rapports with each other. The long-term perspective offered through the initial contract will favor stronger relationships. Thus, the more the unit and its franchise headquarters work as a team, the better the partnership overall performance (Brown and Dev 1997). A high level of initial requirements from the franchisor in terms of investments and cash liquidity can have a negative impact on the franchisor/franchisee relationship and on the franchisee trust in his/her franchisor. Moreover, franchisors with a low level of initial requirements will try to optimize the resource allocation during all the relationship.

H2: Franchising networks with an extended franchising contract duration are more efficient than those with a short franchising contract duration.

H3: Franchising networks requiring a small investment to the franchisees are more efficient than those requiring a high investment.

H4: Franchising networks asking for a low level of cash requirements are more efficient than those asking for a high level of cash requirements.

3 Research Methodology and Data

3.1 Data Envelopment Analysis

Following Farrell (1957), Charnes, Cooper and Rhodes (1978) first introduced the term DEA (Data Envelopment Analysis) in order to describe a mathematical programming approach of the production frontier construction and the efficiency measurement of these frontiers. These last authors set up the CCR model (designed according to their names: Charnes, Cooper and Rhodes) that adopted an input orientation and assumed constant returns to scale (CSR). Later studies have considered some alternative assumptions. For instance, Banker, Charnes and Cooper (1984) introduced the assumption of variable returns to scale (VRS) establishing in this way the BCC model (designed according to their names: Banker, Charnes and Cooper).

Four other basic DEA models, now less frequently used in the literature, were set up as well. These were the multiplicative model of Charnes *et al.* (1982), the additive model of Charnes *et al.* (1985), the Assurance Region DEA model of Thompson *et al.* (1986, 1990) and the Cone-ratio DEA model of Charnes *et al.* (1990). These two last models include an *a priori* information (expert opinion, opportunity cost, transformation or substitution rate) in order to restrict the results to just one best Decision-Making Unit - DMU (Assurance region DEA model), or to link the DEA with multi-criteria analysis (Cone-ratio DEA model).

Some extensions of the DEA model also appeared in the literature. They were the DEA-Malmquist model that disentangles the total productivity change into technical and technological efficiency change (Malmquist 1957) and the DEA-allocative model that disentangles technical and allocative efficiency.

All these models being well established and extensively discussed in the literature, we just briefly describe the main principles of the DEA methodology in the present section.

DEA is applied to assess homogeneous units, called Decision-Making Units (DMUs). A DMU actually converts inputs into outputs. The identification of the inputs and outputs is a difficult and decisive step within an assessment process. The literature review, the data availability and the manager subjective opinions play an important role in this selection.

In the programming method, DEA “floats” a piece-wise linear surface to rest on the top of the observation (Seiford and Thrall 1990). The facets of this hyper plane define the efficiency frontiers. The degree of inefficiency is then quantified and partitioned by a set of metrics that measures various distances from the hyper plane and its facets.

In order to solve the linear programming problem, three characteristics of the model must be specified: the orientation, the returns to scale and the weights of the evaluation system.

- The orientation choice, input orientation or output orientation, depends on the DMU market conditions. In competitive markets, the DMUs are output oriented. Indeed, it is assumed that inputs are under the control of the DMU managers who aim at maximizing the outputs according to the market demand. In the case of exogenous inputs, the production function presented in Figure 1 is the natural choice (Kumbhakar 1987). In monopolist markets, the DMUs are input oriented. Moreover, outputs are endogenous while inputs are exogenous. The cost function is then the natural choice. The input orientation searches for a linear combination of the DMUs that maximizes the excess input use of the DMU *i*, subject to the inequality restraints.
- With regard to the returns to scale, they may be either constant or variable. Both forms (CCR and BCC models) are often presented for comparative purposes.
- In relation to the weights associated with the inputs and the outputs within the objective function, these are subject to the inequality constraints. They are endogenous and defined by the algorithm. They actually measure the distance between the DMU and the frontier.

The production frontier that is constructed through the optimization process (Figure 1) consists of a discrete curve formed by the efficient DMUs, those that maximize the outputs. The inefficient DMUs are below the production frontier because they do not maximize the outputs at the production level.

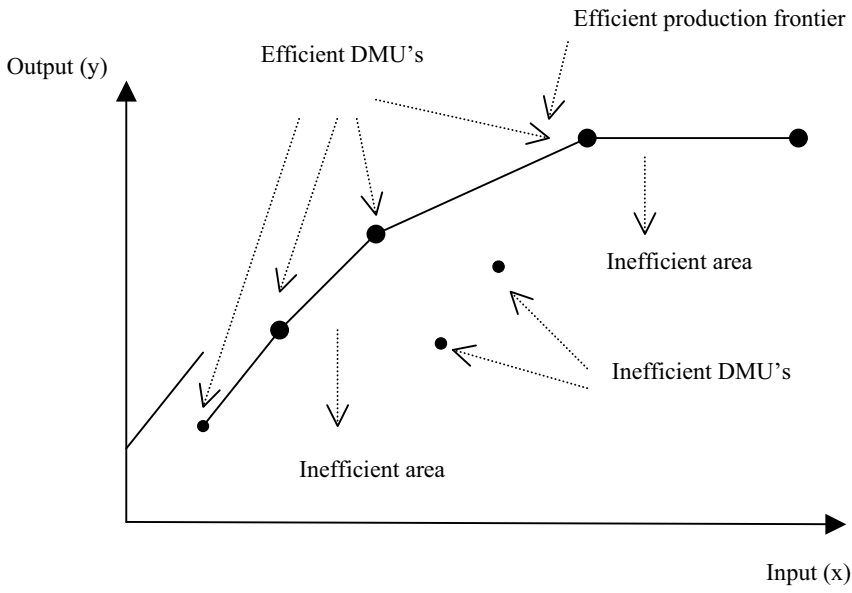


Fig. 1. Data Envelopment Analysis Production Frontier

A Pareto-efficient DMU, also called a DEA-efficient DMU, is defined as a DMU using $m \geq 1$ inputs to secure $s \geq 1$ outputs in either an output or input orientation.

The general purpose of DEA, developed by Charnes *et al.* (1978), considers n DMUs ($j=1,...,n$) using k inputs to secure m outputs. Let us denote respectively x_{ij}, y_{ij} the observed level of the kth input and m^{th} output at DMU j.

An efficient score for the nth DMU can be obtained by maximizing the ratio of total weighted outputs over total weighted inputs for all DMUs subject to the constraint on all such ratios of the other DMUs in the sample to be less than or equal to one. Mathematically, this can be written as follows:

$$\begin{aligned} &\max_{u,v} \frac{uy_i}{vx_i} \\ &s.t. \frac{uy_j}{vxj} - 1 \leq 0 \end{aligned} \tag{1}$$

where u are the output weights and v are the input weights. The system of equations (1) is a fractional programming model of computing technical efficiency and can be solved with non-linear programming techniques. To simplify the computation, a transformation of the fractional programming model allows the system of equations (1) to be formulated as a linear programming problem.

For the CCR model with constant returns to scale and a strong disposability of inputs and outputs, the following linear programming problem is solved to ascertain whether DMU i is DEA-efficient.

$$\begin{aligned} &\min_{z,\lambda} \lambda_i \\ &st \\ &\sum_{i=1}^{n} x_{ij} z_i - \lambda_i x_{ij} \leq 0 \\ &\sum_{i=1}^{n} y_{ij} z_i - \lambda_i y_{ij} \geq 0 \\ &z_i \geq 0, \lambda_i \, free \end{aligned} \tag{2}$$

For the BCC model with variable returns to scale and a strong disposability of inputs and outputs, the following linear programming problem is solved to ascertain whether DMU i is DEA-efficient.

$$\begin{aligned} &\min_{z,\lambda} \lambda_i \\ &st \\ &\sum_{i=1}^{n} x_{ij} z_i - \lambda_i x_{ij} \leq 0 \\ &\sum_{i=1}^{n} y_{ij} z_i - \lambda_i y_{ij} \geq 0 \\ &\sum_{i=1}^{n} z_i - 1 = 0, \lambda_i \, free \end{aligned} \tag{3}$$

where λ is a scalar variable measuring the efficiency level.

The model works as follows. For a given set of possible λ values, the left hand side of the input- and output-related constraints specifies a production point within the set of production possibilities. The model seeks a production possibility set point which offers at least the output levels of DMU j_0 while using a proportion of its input levels as low as possible. With the superscript * denoting optimal values, the j_0 DMU is DEA-efficient if, and only if, $\lambda_0^* = 1$. If $\lambda_0^* \leq 1$ the j_0 DMU is DEA-inefficient λ_0^* is a measurement of the radial DEA efficiency of DMU j_0.

The model assesses efficiency in a production context and its counterpart assesses efficiency in a cost context. By virtue of duality, the primal and dual models yield the same efficiency ratings in respect to DMU j_0 (See Charnes, Cooper and Rhodes (1978) for details).

3.2 Data

We used cross-sectional data concerning the 150 first US franchising networks ranked in the Entrepreneur's 25 Annual Franchise 500® (2004) in order to estimate the production frontier for the franchising networks and test the hypotheses formulated in the previous section. We have chosen to analyze the 150 first networks of the ranking in order to focus on the main and largest networks as already mentioned in a previous paper of Ehrmann and Spranger (2004). We assumed a franchising production being implemented by the franchising department of the network. The outputs are defined as the receipt in value and quantity of the franchising department. The inputs are defined as the direct costs of the franchising department and the restrictions imposed to the franchisees.

We measured the outputs by the three following indicators:

- The average franchising fee (in K$),
- The average ongoing royalty (in % of the franchised unit sales),
- The one-year-variation in the number of franchised units in the US market (between 2002 and 2003).

And, we measured the inputs by four indicators:

- The number of employees in the franchising department of the network,
- The average investment required to the franchisee by the franchisor (in K$),
- The duration of the franchising agreement (in years),
- The cash liquidity required to the franchisee by the franchisor (in K$).

The characteristics of these variables are depicted in Table 2. The combination of these seven indicators ensured the DEA standards. Indeed, the minimum number of DMUs -in this case, a DMU corresponds to a franchising network- is greater than three times the number of inputs plus outputs ($150 \geq 3(3+4)$) (Raab and Lichty 2002).

Table 2. Descriptive Statistics of the Data

Variable	Description	Min	Max	Mean	Standard deviation
Outputs					
Franchise fee	Fixed amount paid by the franchisee to the franchisor when opening a new franchised unit (in K$)	1	76	38.48	21.885
Ongoing royalty fee	Percentage of monthly or annual sales paid by the franchisee to the franchisor (in %), including any advertising royalty	1	39	19.75	10.932
Change in franchised units	One-year-variation in the number of franchised units within the franchising network in the US market	9	2448	114.95	283.162
Inputs					
Employees in the franchising department	Number of employees in the franchising department of the network	2	186	30.63	45.810
Average total investment in K$	Investment required to the franchisee by the franchisor in order to open a franchised unit (in K$)	55.5	9636.5	701.62	1175.855
Duration of agreement in years	Duration of the franchising agreement (in years)	1	35	12.20	5.982
Cash liquidity requirements	Cash liquidity required to the franchisee by the franchisor (in K$)	0	1200	92.31	146.353

3. 3 Model Specifications

As mentioned above, the DEA index can be computed in several ways. In this empirical study, we estimated an output-oriented, technically efficient DEA index, assuming that the franchisors aim at maximizing their production.

The variable returns to scale (VRS) hypothesis was chosen because a strong disposability of inputs and outputs was assumed. The use of VRS reference technology also has to be justified. If a strong disposability of inputs and outputs is assumed, technical efficiency can be split up into two different components: pure technical efficiency and scale efficiency (Fare *et al.* 1994). The VRS scores only measure pure technical efficiency. However, the constant returns to scale (CRS) index is composed of a non-additive combination of pure technical and scale efficiencies. A ratio of the overall efficiency scores to pure technical efficiency scores therefore provides a scale efficiency measurement.

As far as the test of the hypotheses is concerned, the Mann-Whitney U-test was used.

4 Results

4.1 General Results

The relative efficiency of the most efficient franchising networks within the population studied is displayed in Table 3. Several comments arise from these figures.

- The best-practice calculations indicate that finally a small percentage of the franchising networks work at a high level of pure technical efficiency. Over the 150 franchising networks studied, only 28 of them are 100% VRS-efficient and 19 are 100% CRS-technical efficient as well as scale efficient.
- All technically CRS-efficient franchising networks are also technically VRS-efficient. This means that the dominant source of efficiency for the franchising networks is scale. Scale inefficient franchising networks experience either decreasing or increasing returns to scale. The experience of decreasing returns to scale means that the network is too large in size to take full advantage of scale. In this case, the franchisor should therefore think about closures or re-organization of the activities. The experience of increasing returns to scale means that the network is too small in size to take a full advantage of scale. Thus, the franchisor should think about unit addition or consolidation.
- According to the BCC results that represent pure technical efficiency due to management skills, only 28 franchising networks out of 150 are efficient. Management skills are consequently an additional reason for efficiency. Moreover, very few of these 28 efficient networks are in the top of the Entrepreneur's 25 Annual Franchise 500® ranking.

Table 3. DEA Technically Efficient Scores for the First 38 Efficient US Franchisors

	Designation	Technically Efficient, Constant Re-turn-to-Scale CCR model	Technically Efficient, Variable Re-turn-to-Scale BCC model	Technically Efficient Scale
1	Curves	1.000	1.000	1.000
2	Jan-Pro Franchising Int'l. Inc.	1.000	1.000	1.000
3	Liberty Tax Service	1.000	1.000	1.000
4	Results! Travel	1.000	1.000	1.000
5	Entrepreneur's Source, The	1.000	1.000	1.000
6	Cruise Planners	1.000	1.000	1.000
7	Mr. Goodcents Franchise Systems Inc.	1.000	1.000	1.000
8	Wingstop Restaurants Inc.	1.000	1.000	1.000
9	Home Helpers	1.000	1.000	1.000
10	Batteries Plus	1.000	1.000	1.000
11	American Leak Detection	1.000	1.000	1.000
12	Glass Doctor	1.000	1.000	1.000
13	Brooke Franchise Corp.	1.000	1.000	1.000
14	Sport Clips	1.000	1.000	1.000
15	Hilton Garden Inn	1.000	1.000	1.000
16	Wetzel's Pretzels	1.000	1.000	1.000
17	Goddard Systems Inc.	1.000	1.000	1.000
18	Cleaning Authority, The	1.000	1.000	1.000
19	Fox's Pizza Den	1.000	1.000	1.000
20	Anago Franchising Inc.	0.963	1.000	0.963
21	Bruster's Real Ice Cream	0.94	1.000	0.940
22	Hollywood Tans	0.813	1.000	0.813
23	Martinizing Dry Cleaning	0.806	1.000	0.806
24	Jazzercise Inc.	0.660	1.000	0.66
25	Kumon Math & Reading Centers	0.603	1.000	0.603
26	Heaven's Best Carpet & Uphol. Cleaning	0.579	1.000	0.579
27	Action Int'l.	0.532	1.000	0.532
28	Carl's Jr. Restaurants	0.464	1.000	0.464
29	Dr. Vinyl & Associates Ltd.	0.967	0.991	0.976
30	Assist-2-Sell	0.797	0.982	0.812
31	Leadership Management Inc.	0.942	0.973	0.968
32	HomeTeam Inspection Service, The	0.581	0.962	0.604
33	Subway	0.639	0.956	0.668
34	Stanley Steemer Carpet Cleaner	0.875	0.942	0.928
35	Money Mailer LLC	0.652	0.936	0.697
36	CruiseOne Inc.	0.931	0.931	1.000
37	Ben & Jerry's	0.559	0.912	0.614
38	WSI Internet	0.848	0.905	0.936
…	…	…	…	…
500	Jani-King	0.044	0.072	0.610
	Mean	0.493	0.621	0.748
	Median	0.466	0.642	0.814
	Std. Dev	0.310	0.293	0.224

- The median is higher than the mean for the BCC scores, signifying that the majority of the franchising networks have a BCC score higher than the mean. Furthermore, the values of the standard deviation are quite high in the three columns. This indicates a significant dispersion of the efficient scores within the population studied.

To conclude, the main reasons for efficiency are scale and managerial skills. Nevertheless, the US franchising networks display a relatively low level of efficiency.

4.2 Adjustments Towards the Frontier of the Best Practices

Although DEA enables identification of inefficient franchising networks in the population studied, it does not identify the reason(s) for this inefficiency. DEA actually identifies the slack for the inefficient franchising networks and gives them a reference set (peer group) which allows to formulate some specific recommendations useful to improve the efficiency level.

Adjustments for the inefficient franchising networks can be identified for outputs and inputs in order for these networks to join the efficient frontier. Table 4 depicts these adjustments for a particular franchising network: *Dr. Vinyl & Associates Ltd*[3].

Table 4. DEA Results for the "*Dr. Vinyl & Associates Ltd.*" Network

Outputs and inputs	Original value	Radial movement	Slack	Projected value
Franchising fee	74.500	0.656	0.050	75.206
Royalty	37.750	0.332	0.000	38.082
Change in franchised units	2.000	0.018	24.806	26.824
Employees in the franchising department	9.000	0.000	-0.706	8.294
Average total investment	92.000	0.000	0.000	92.000
Duration of agreement	10.000	0.000	-2.056	7.941
Cash liquidity requirements	15.000	0.000	-2.824	12.176

We checked for this particular franchising network *Dr. Vinyl & Associates Ltd* that there were some slacks in the outputs and inputs. There is actually some room to decrease the inputs with slacks and to increase the outputs with slacks in order for this franchising network to catch up with the frontier.

As far as the outputs are concerned, we verified that there were some slacks in the franchising fee and in the change in the number of franchised units. Regarding the inputs, we verified that there was some room to decrease the franchising agreement duration and the cash liquidity requirement.

[3] The results for other non-efficient franchising networks are available from the authors under request.

The projected value of outputs identifies the increase towards which the *Dr. Vinyl & Associates Ltd* needs to perform in order to reach the efficient frontier. The peers used to benchmark this franchising network are the ones belonging to the frontier of the best practices.

4.3 Efficiency by Different Kinds of Franchising Networks

The results of the Mann-Whitney U-test for the efficiency scores obtained from the CCR model (Bhapkar 1984) are displayed in Table 5. The Mann-Whitney U-test has been recommended for a non-parametric analysis of the DEA results by Grosskopf and Valdamanis (1987) and Brockett and Golany (1996). This test was used in the present analysis because the efficient score results did not fit the standard normal distribution.

Table 5. Mann-Whitney Test of Differences in Efficiency

Reference	Mann-Whitney U test	Z	Asymptotic significance (two-tailed)
High number of franchised units vs. small number of franchised units within the network	199.00	-1.40	0,030**
Low investment requirement vs. high investment requirements	153.00	-1.58	0,042**
Extended franchising contract duration vs. short duration of franchising contract	148.00	-1.89	0.025**
Low level of cash requirement vs. high level of cash requirements	123.35	-1.25	0.035**

** Indicates significance at the 5% level.

The minus sign of the Z scores indicates that:

- The franchising networks with a large number of franchised units have higher efficiency scores than those with a small number of franchised units. H1 is supported.
- The franchising networks with extended franchising contract duration have higher efficient scores than those with short franchising contract duration. H2 finds support.
- The franchising networks with low investment requirements have higher efficiency scores than those with high investment requirements. H3 is supported.
- The franchising networks with low level of cash requirements have higher efficiency scores than those with high level of cash requirements. H4 finds support.

5 Discussion

The overall conclusion is that the efficiency of the 150 franchising networks analyzed in the present study is heterogeneous with too many inefficient networks and a small number of them that are really efficient. Hence, there is some room to improve the inefficient franchising networks in order for them to upgrade their efficiency and to converge on the frontier of the best practices.

The results also indicate that scale is the major issue in this business format efficiency. Indeed, the VRS scores are higher than the CRS ones, and all the CRS efficient franchising networks are also VRS-efficient. Moreover, managerial skills represented by the BCC scores are scarce.

Finally, some network features seem to enhance efficiency. Indeed, a high number of franchised units, a low level of requirements in terms of investment and cash liquidity, and an extended franchising contract duration induce efficiency.

What are the explanations of these findings? As mentioned earlier, DEA does not identify the factors that cause the inefficiency and only focus on the DMUs, in this case the franchising networks, in which inefficiency exists. Nonetheless, this consists of some valid information because the inputs and the outputs that contribute to this inefficiency are identified (Bessent and Bessent 1980). Probably, the main reason for the observed inefficiency is linked to different strategically behaviour among different franchisors, mainly according to the industry in which they are, their past experiences, their organizational structure, etc.

Other reasons that can be suggested as reasons for inefficiency in franchising networks stem from the strategic-based groups and the differences in resources. Firstly, strategic-based groups (Caves and Porter 1977) refer to differences in structural firm characteristics within an industry, which induce differences in performance. In the franchising industry, networks with similar asset configuration usually pursue similar strategies with similar performance results (Porter 1979). While there are different strategic options among sectors of an industry, because of mobility impediments, not all options are available for each sector. This induces a spread of the efficient scores within the industry. Secondly, the differences in resources among the companies (Barney 1986, 1991; Rumelt 1991; Wernerfelt 1984) hold that franchisors are heterogeneous in relation to the resources and capabilities on which they base their strategies. These resources and capabilities may not be perfectly mobile across the industry. This results in a competitive advantage for the best-performing franchising networks.

Purchasable assets cannot constitute sources of sustainable profits. Indeed, critical resources are not available in the market. Instead, they are built and accumulated on the franchisor premises, their non-imitability and non-substitutability being dependent on specific features of their accumulation process. Differences in resources thus result in barriers to imitation (Rumelt 1991) and franchisor inability to alter their accumulated stock of resources over time. In this context, unique assets are seen as inherently exhibiting differentiated levels of efficiency. Sustainable profits are ultimately a return on the unique assets owned and controlled by the franchising networks (Teece *et al.* 1997).

6 Limitations and Tracks for Future Research

This paper has two main kinds of limitations: these related to the data set and these related to the DEA methodology itself.

As far as the data set is concerned, the homogeneity of the franchising networks used in the empirical analysis is questionable. Indeed, we compared franchising networks with different dimensions, different locations, and which may face different restrictions. They might be considered to be not directly comparable. However, we can always claim, whatever the empirical study, that the DMUs are not comparable, and therefore, a ratio analysis could equally not be carried out. Yet, the fact that all the companies studied are franchising networks and seem to follow similar strategies - the use of franchising to develop their business - gives a sufficient justification for analyzing them as a homogenous population. Nevertheless, a relevant track for future research will deal with the implementation of such DEA models to specific franchising industries. For instance, we could focus on the efficiency of the restaurant, hotel, or real estate networks.

Moreover, the data set only concerns one year: 2003 and one country: the United States, the conclusions are therefore limited. A panel data set or a multi-countries data set would be relevant to increase the result generalization.

An important limit linked to the data as well consists of the non-availability and then the non-use of the total network sales. Indeed, in order to measure the revenues of the franchisor, we only used the royalty rate and the franchising fee. Even if Stern and El-Ansary (1988) asserted that these two instruments make up over 50% of the franchisor total profit, the total sales is also a relevant measure of the franchisor performance. This variable could be added to the outputs and would increase the reliability of the model.

Regarding the DEA model itself, the DEA does not impose any functional form on the data, neither does it make any distributional assumptions for the inefficiency term, nor does it make a prior distinction between the relative importance of any combination of inputs and outputs. These limitations are precisely the most distinctive and attractive characteristics of the DEA methodology. This efficiency measurement assumes that the production function of the fully efficient franchising networks is known. In practice, this is not the case and the efficient isoquant must be estimated from the sample data. In these conditions, the frontier is relative to the population considered in the analysis. The least attractive characteristic of DEA is that without any statistical distribution hypotheses, the DEA does not allow for random errors in the data, assuming away measurement error and chance as factors affecting outcomes (Seiford and Thrall 1990).

Several tracks for future research can be mentioned. First, in this paper, the DEA model allowed for complete weight flexibility. In situations in which some of the measures are likely to be more important than others, DEA allows for restricting factor weights through linear constraints. These linear constraints represent ranges for relative preferences among factors based on managerial input.

Such analysis enables effective incorporation of managerial input into the DEA evaluations. Second, the input and output are context-specific. More comprehensive measurement of inputs and outputs allowing for non-discretionary factors, such as environmental, socio-economic and qualitative features, would have to be taken into consideration. The influence of non-discretionary variables, excluded from the analysis, amounts to an assumption that these factors are constant across the population. Third, non-parametric analysis, free-disposal hull analysis or alternatively parametric analysis, can be used to assess the efficiency scores. However, previous research papers have shown that the DEA scores are usually inferior in values to econometric scores, but that the ranking is preserved (Bauer *et al.* 1998).

7 Conclusions

This article proposed a simple framework for the comparative evaluation of a population of US franchisor rationalization of their operational activities. The analysis was based on a DEA model that allows for the incorporation of multiple inputs and outputs in determining the relative efficiency scores. Benchmarks were provided for improving the operations of poorly performing franchising networks. Several managerial insights and implications arising from the empirical study were discussed.

The general conclusion is that the US franchising networks display different levels of efficiency. So, there is some room to upgrade the efficiency of the least efficient franchising networks. A Mann-Whitney U-test confirmed that the franchising networks with many franchised units are more efficient than those with a low number of franchised units. Franchising networks with a low level of requirements in terms of investment and cash liquidity tend to have higher efficiency scores than those with a high level of requirements. Finally, franchising networks with an extended franchising contract duration tend to have higher efficient scores than those with a shorter contract duration.

Lastly, we must recognize that future DEA model applications will have to take into account some additional qualitative variables in order to confirm the adequacy of these first results.

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Franchising as Entrepreneurial Activity: Finnish SME Policy Perspective

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Abstract. The present study takes an entrepreneurship viewpoint to franchising. To create a conceptual background, past franchising literature was reviewed and prior studies considering franchising as entrepreneurial activity were analyzed. The current Finnish Entrepreneurship Policy Program was utilized to explore the domain of entrepreneurship and franchising. The question is, how franchising is linked to the aims of the Entrepreneurship Policy Program and how franchising could potentially be used to foster SME activity in the Finnish economy? The literature analysis showed that prior franchising studies have rarely regarded franchising as a form of entrepreneurship. Likewise, theories explaining the birth, growth and survival of franchising are rather distant from entrepreneurship. However, recent franchising enquiries have taken an approach that comes closer to entrepreneurship. Franchising is a rapidly growing form of business and its importance in the economy increases. The investigation indicated that franchising has multiple features overlapping with the present small business policy agenda. Hence franchising could be used as one vehicle to attain the set objectives.

Keywords. Franchising, entrepreneurship, small business policy, Finland

1 Introduction

This study focuses on franchising. Franchising is approached from the viewpoint of entrepreneurship, in which case franchising is understood as a form of starting

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and conducting entrepreneurship and business.[2] The approach utilized in the study is relatively new and little applied. The research tradition of franchising, like that of entrepreneurship, is fairly short, its foundation is multidisciplinary and its theories are rather undeveloped.[3] In business studies, franchising has largely been looked at from the point of view of marketing, i.e. as a retail distribution channel solution and a form of international business, as well as from a management point of view, i.e. as a form of organization, strategy and cooperation between enterprises. Earlier franchising studies have to a large extent been isolated, insufficiently integrated and relied too much on the viewpoint of one party, the franchisor (see e.g. Elango and Fried 1997; Stanworth and Curran 1999; Hoy and Stanworth 2003a; 2003b).

This conceptual paper is organized as follows: to begin with, prior franchising research is generally reviewed and then examined from the entrepreneurship viewpoint. Subsequently, the current state and scope of franchising in the Finnish economy is charted. To set a scene for joint evaluation of franchising and entrepreneurship, the present Entrepreneurship Policy Program is briefly presented. The paper ends by showing the overlapping features of franchising and business policy and pinpointing the potential measures how franchising could be used advancing the set goals of the program.

2 Previous Franchising Research – A Literature Review

Franchising research has a fairly short history. The oldest known and frequently cited studies were published in the late 1960s. The *Journal of Retailing*, an academic journal focusing on marketing channels, edited a special issue dedicated to franchising in winter 1968.[4] The issue included several articles that can be regarded as the

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[2] In *New Venture Strategies* from 1980, considered a classic, Karl Vesper saw franchising as one of the main strategic forms of competitive advantage, the so-called ”entry wedge”, with the aid of which a new enterprise can be founded, thus giving rise to new entrepreneurship in existing competition in the market without special innovation (Vesper 1990, 192-194, 217-224). Vesper’s view is in line with that of Baumol (1986). According to the idea presented by Baumol, entrepreneurs can be divided into two groups on the basis of the nature of the business idea of the enterprise founded: initiative, i.e. innovative, and imitative entrepreneurs (cf. Aldrich and Martinez, 2001; innovators vs. reproducers). In franchising, the franchisor could therefore be seen as being initiative and franchisees as imitative entrepreneurs. In franchising, business concept and operation that is already working and possibly successful is reproduced in a new market area. This way franchising contributes to efficient dissemination of innovations.

[3] E.g. Bygrave (1989, 7-13) described the multidisciplinary background of entrepreneurship, timing the actual development of the entrepreneurship paradigm to the beginning of the 1960s, when systematic empirical entrepreneurship research began. (see also Grant and Perren 2002).

[4] The special issue was published in the 43rd volume of the journal.

first pioneering efforts in the field of franchising research. Research on the contents of prior franchising studies was not launched until the late 1990s. For example Kaufmann (1996) brought forward franchising-specific fields of study in his overview concerning the state of franchising research. These included the following: motivation to become a franchisee, franchisee failure rates and industry growth.

Subsequently Elango and Fried (1997) analyzed extensively the previously published franchising studies. As far as is known, this was the first study of its kind. Their research material consisted of 99 known and widely cited studies, all of which were first summarized, after which their content was analyzed. They divided the studies into three more comprehensive streams: franchising and society, creation of the franchising relationship, and operation of a franchising system. The classification was based on their observations of different orientations, perspectives and research questions of the studies. The first category is politically oriented, and its viewpoint is the societal impact of franchising. The latter two are management-oriented. The second focuses on the organizational efficiency and economic profitability of franchising. The third orientation uses the existing franchising relationship and its operative issues as its starting point.

Table 1 has been drawn up based on the analysis of Elango and Fried (1997). It shows, by research stream, the orientation, perspective and the disciplines of research in which studies have been conducted, as well as the fundamental research questions and most commonly studied individual issues in each category.

In addition to the semantic taxonomy of earlier studies, Elango and Fried (1997) made several recommendations, particularly concerning improvement of fragmented research. Firstly, they recommended that franchising theories would be extended into resource-based theory, because according to them, franchising is ultimately about pooling franchisees' and franchisor's different resources. According to their view, also the franchisor should be considered an agent, because franchisees must monitor the operation of the franchisor.[5] In their view, the agency theory had been applied in a limited manner. All in all, they perceived that franchisees should be looked at as an intelligent party of the franchise relationship, not only as the implementer of the franchisor's objectives, which seemed to be the dominant view applied by earlier studies. Franchisees inevitably make their own important contribution towards the success of the relationship. This point is a pertinent one when considering franchising from an entrepreneurship viewpoint.

The franchise relationship had been looked at in a static manner. According to Elango and Fried, it has thus so far been impossible to study the changing and dynamic relationship. They felt that the fundamental question of the relationship and the ultimate advantage of franchising, the relationship between decision-making authority and division of residual claim rights deserves further research attention

[5] The moral hazard problem is two-sided in franchising since franchisees need to monitor the franchisor. This causes a collective action problem for franchisees. (Lafontaine 1992).

(cf. property rights theory). They also pointed out the need for franchising examinations in individual business industries. (Elango and Fried 1997)

Table 1. Previous franchising studies elaborated

Main stream of franchising study	Orientation, perspective and disciplines of study	Fundamental research questions	Issues
I Franchising and society	Public-policy Utility to society • Law • Economics	"*Should we allow franchising?*" "*How much the franchisor might abuse the relationship to the detriment of the franchisee?*"	Economic efficiency vs. antitrust concern – pricing – exclusive territories and dealings – contract clauses – disclosure
II Creation of the franchising relationship	Managerial Performance and profit maximization • Management • Management science • Economics, • econometrics	"*Should we conduct business operations separately or in collaboration with others through a franchising system?*"	Franchising as a form of organization – reasons to franchise – rent sharing – units to own or franchise – international franchising
III Operation of a franchising system	Managerial Franchisees existing to operationalize the goals of the franchisor • Marketing • Retailing	"*What is the best way to operate the franchising system?*"	Franchising as a type of marketing channel – control, power, autonomy – co-operation – trust, commitment, satisfaction – conflicts – dependence-interdependence-independence

In their analysis of the methods used in franchising research, Elango and Fried (1997) found several factors that had restricted the studies. Firstly, empirical studies had been exclusively based on quantitative methods, which give a limited amount of information about a large number of cases. Results aiming at generalization tend to mask variation, and the complexity which is evident in practice and which qualitative case studies are able to reveal, is often lost. According to the authors, data had many times been gathered by postal questionnaires, but the amount of secondary data was also considerably high. In empirical studies on franchisees, all subjects in a sample often came from a single franchise chain, whereas in studies on franchisors various franchise listings were used for sampling. The authors

also observed a significant deficiency in the variables used for measuring performance. According to them, turnover or the number of outlets were merely too simplified as measures of performance. The main problem was from whose point of view performance should be measured – that of the franchisor, the franchisees or the system as a whole. Instead of *descriptive* studies that currently dominate the scene, the focus should be on *prescriptive* studies. In this paper a pragmatic and thus prescriptive approach in conjoining franchising and entrepreneurship in the small business policy perspective is taken.

Subsequent the franchise literature classification by Elango and Fried (1997), more limited classifications have been proposed in other instances. As they were developing an integrative and comprehensive explanatory model for franchising, Stanworth and Curran (1999) analyzed previous literature and listed the most frequent subjects of franchise research. They were the following: franchisor's motives for the adoption and retention of the franchise format, franchise contracts, the franchisor-franchisee relationship, locational and pricing decisions, trends in ownership redirection, and international franchising and globalization issues. Later, Hoy, Stanworth and Purdy (2000) came up with a partly similar classification. They identified six issues that had dominated franchising research: distribution channels, contract issues, international expansion and the benefits of internationalization, growth models and degrees of survival and failure.

Meanwhile Young, McIntyre and Green (2000) published a content analysis of 285 research papers presented at thirteen *International Society of Franchising* (ISoF)[6] conferences held in 1986 and 1988-1999. This provided an applicable means of inspecting earlier franchising research, because the community comprises many prolific frontline researchers and scholars, and many of the studies presented at the conferences are later published in academic journals in the field. The most popular subjects of the studies analyzed were as follows: international franchising (18%), franchise management (17%), franchise relationship issues (16%), performance and growth (13%), juridical and political issues (11%), marketing (9%), nature and scope of franchising (9%), economics (3%), *entrepreneurship* (3%) and methodology and modeling (2%). The results of Young et al. (2000) can thus be regarded as being mostly in line with those of Elango and Fried (1997), although the studies published within the ISoF have included a relatively

[6] Founded in 1986 and operating in the US, the International Society of Franchising is an international community of academic franchising scholars. The society did not meet in 1987, but after that a conference has been arranged every year jointly with the annual convention of the International Franchise Association (IFA). Around 30 research articles are published each year in Conference Proceedings. The latest conference arranged in February 2006, in Palm Springs, CA, USA, was the 20th. The number of franchising studies published so far exceeds 400. Until 1999 the Society was known as the Society of Franchising, but the name was changed due to the increasing number of international participants. At present, the Society has more than 150 academic members from some 20 countries.

large number of themes related to franchising implementations which were called for by Elango and Fried.

A total of 154 or slightly over half (54%) of the studies analyzed by Young et al. (2000) were empirical studies. Secondary data was utilized in a good third (37%) of the studies. Interviews had been used as the primary method of gathering material in one out of seven (14%) studies, while postal surveys were the most widely used method, in 50% of the studies. The least frequently used method was case study, which was only used in ten studies. On this point the observation and criticism of Elango and Fried (1997) regarding the scant utilization of case studies is in line with the results of Young et al. (2000). There is a risk that studies relying strongly on quantitative methods produce descriptive results that are of relatively little use from the viewpoint of practical business management.[7]

The subjects of study of empirical research were fairly equally distributed. The most commonly studied group was franchisees (39%), followed by franchisors (34%) and other interest groups (27%). The observation of Young et al. (2000) is surprising on this point, because the franchisor's perspective has generally been the dominant one. The majority of empirical studies were fairly exclusively limited to the hospitality sector, i.e. hotel and restaurant industries. One fourth of the studies analyzed had been conducted outside the United States. In addition to the US, research findings had been published from a total of 21 countries.[8]

Franchising-related research has been carried out for some 35 years. The scholarly publications have mainly been of North American origin, but increasingly from other parts of the world as well. From the 1980s onwards, active research has been carried out in this field in Europe, particularly in Great Britain, as well as in Australia. The number of studies in the field has thus grown considerably since the 1990s. The franchising research has been multidisciplinary in nature. Economics, marketing, law, sociology and psychology are some examples of sciences and disciplines in which franchising-related studies have been published. However, franchising studies have rarely been carried out on the field of entrepreneurship.

3 Franchising from the Viewpoint of Entrepreneurship

Despite the tradition of franchising research and the increasing economic importance of franchising, it has often been called to question whether franchising should be accepted as a legitimate field of study in its own right, or whether it should merely be thought of as a fairly peripheral type of inquiry within some branch of science. Al-

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[7] According to Hoy (1997), the problem of the results produced by entrepreneurial studies in general is their lack of practical relevance. Hoy and Stanworth (2003a, 6) do not regard the problem to be equally serious in franchising studies.

[8] Sixteen studies had been published on Europe, three of them on Scandinavia. Eleven studies focused on the Soviet Union or Russia, ten on Asia, eight on Australia, two on Central and South America, while there was one study each on Africa and India.

though poorly understood at the moment, franchising is without a doubt a phenomenon worthy of study (see Hoy and Stanworth 2003a, 1-5)

Published franchising literature can be roughly classified into three schools of thought. The differences between them are based on their diverse approaches to franchising (see Hoy and Stanworth 2003b, 9-10). The first school sees franchising as functional activity of existing business, which is why it should be studied by applying the models and theories regarding those functions. Examples of this are marketing and distribution channel studies conducted within marketing research, or studies on management and related strategic and contract-based cooperation between firms. The second school sees franchising as an original phenomenon whose characteristics can however be explained through existing theories. Examples of the approach of this second school are general business theories such as agency theory and transaction cost theory as well as life cycle theory.

The third and most recent school approaches franchising as a unique phenomenon that can only be understood by developing or applying models or theories that are particularly suited for the purpose. Franchising is thus seen as a separate, individual phenomenon. Such early attempts have been put forth by Kaufmann (1996), Stanworth and Curran (1999) as well as Hoy, Stanworth and Purdy (2000). Kaufmann took up issues of research that were explicitly franchising-specific. Stanworth and Curran developed a sociological franchising model, while Hoy et al. identified six themes that had dominated franchising studies.

In this study, franchising is understood as a form of entrepreneurship and as part of entrepreneurship research. The conceptual starting point of the study is the uniqueness of franchising, which can be described and explained both by applying existing theories from other fields of science and by developing them in a franchising context (cf. 2nd & 3rd schools). Franchising is defined in the same way as Curran and Stanworth (1983, 11) ended up defining it as they studied the evolution of the franchising concept in earlier studies: ”A business form essentially consisting of an organization (the franchisor) with a market-tested business package centered on a product or service, entering into a continuing contractual relationship with franchisees, typically self-financed and independently owner-managed small firms, operating under the franchisor’s trade name to produce and/or market goods or services according to a format specified by the franchisor.”[9]

Franchising is properly suited as a field of entrepreneurship research. As a discipline, entrepreneurship comes close to and overlaps many subjects in the field of business economy, such as marketing, management and accounting, while having a multidisciplinary background. The interrelation between entrepreneurship and franchising can be justified e.g. by the fact that franchising research is about entrepreneurial cooperation between two different types of entrepreneurs, franchisor and franchisees (Shane and Hoy 1996). Spinelli, Rosenberg and Birley (2004, xvi)

[9] The definition is of European origin, and it describes most accurately Business Format Franchising as opposed to Product Distribution and Trade Name Franchising. The definition has several deficiencies, e.g. in relation to market testing, financing and size of franchisee, as the authors later became aware of as well (see Stanworth and Curran 1999).

agree with the view, as they perceive franchisors and franchisees as entrepreneurs (see also Stanworth 1995). In addition, franchising can be defined as a type of entrepreneurial organization. The operation of the franchisor, i.e. setting up the franchise system, and the operation of the franchisee, i.e. implementation of entrepreneurship within the franchise chain, are undoubtedly entrepreneurial activities (Hoy and Shane 1998). Vesper (1980) defines franchising as one form of entering the market upon which a new business and entrepreneurship can be based on. In their comprehensive analysis of the focus of entrepreneurship research, Ucbasaran, Westhead and Wright (2001, 59; 65-66) placed franchising as one type of organization that entrepreneurs select.

The above views of Hoy and Shane have later received support from the study of Kaufmann and Dant (1999). It should however be taken into account that the view of franchising as entrepreneurship is strongly contradictory to the previously widely held belief according to which franchising was even seen as the antithesis of entrepreneurship. According to this view, franchising is multiplication of successful business operation that does not call for creativity, a typical feature of entrepreneurship (Kaufmann and Dant 1999, 6).[10]

Hoy and Shane (1998) identified significant overlapping between entrepreneurship and franchising in the seven main approaches prevalent in entrepreneurship research. By entrepreneurship research they referred to studies where the only unit of analysis was venture, i.e. not individual nor environment, all three of which are included simultaneously in the analysis of the process view of entrepreneurship. The venture as part of entrepreneurship research forms an entity of its own, with characteristics that distinguish it from the traditional firm or organization view (cf. Davidsson and Wiklund 2001). The subject of study is value creation through venture establishment or acquisition, albeit so that entrepreneurial actions prior to and subsequent start-up are included in the examination. Approaches to entrepreneurship research (Hoy 1995) and their links to franchising are as follows:

Incubator Organizations.[11] Franchise systems act as incubators of new ventures and franchise operations.

Business Plans. The franchisor requires that the franchisee has a business plan, which is therefore much more common in franchising than in independent business. In the United States, franchisors are obliged by authorities to draw up a public "business plan"; a document entitled Uniform Franchise Offering Circular, in order to ensure access to information of potential franchisees.[12]

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[10] See for example Rubin (1978), Norton (1988), and Anderson, Condon and Dunkelberg (1992).

[11] In this connection, incubator refers to the organization the entrepreneur comes from prior to establishment of the venture, i.e. not incubator in the traditional sense of the word.

[12] The same applies to France.

Investment criteria. Franchising is a source of capital needed for growth when other sources of financing are not necessarily available to the franchisor. Venture capitalists have played an increasing role as financers of franchise systems.

Success factors. Franchisors' and franchisees' failure and survival are a subject of constant study. The aim is to compare the results obtained to the failure and survival of stand-alone firms.

Corridor Principle. Franchisors recruit potential franchisees among active entrepreneurs. In addition, franchisors have often worked as entrepreneurs or business managers prior to launching franchising.

Corporate Culture. In franchising, the franchisor must be able to establish and maintain circumstances where new franchisees are recruited and where they own and manage units independently (i.e. franchised units) or along with the franchisor (i.e. company-owned units; dual distribution).

Life Cycle Models. In franchising, the key issue is to understand the birth of the business organization and its later evolution into a franchise system.

Kaufmann and Dant (1999) combined research focusing on franchising, franchisors and franchisees into a separate, field of entrepreneurship research. They based this on an extensive analysis where definitions of entrepreneurship were first divided into three semantic groups, after which the applicability of franchising was compared to their contents. The three groups of concept were personal traits perspective, process perspective, and activities perspective.[13] As a result of the comparisons carried out, franchising was observed to be almost fully compatible with the concepts of entrepreneurship. According to the authors, the notions of entrepreneurship research are closely associated to manufacturing-type business, which on the other hand is alien to the commonly prevailing retail-type franchising.

In addition, Kaufmann and Dant (1999) pointed out four special franchising-related research themes that have relevance to entrepreneurship research. They were the following:

Franchisor as Retail Entrepreneur. In retail franchising, often relying on narrow niche segments, the scale of economically profitable business is significantly

[13] The authors were aware of the deficiencies regarding the concepts of entrepreneurship as well as the lack of consensus concerning a universal concept of entrepreneurship (e.g. Low and MacMillan 1988; Amit, Glosten and Muller 1993). Therefore they concluded to define entrepreneurship as a personal quality that is manifested by an individual engaged in entrepreneurial activity, which in turn is defined as the activities of a unique individual called an entrepreneur (Kaufmann and Dant 1999, 9). Moreover, they applied view presented by Venkataraman (1998). According to that view entrepreneurship as a scholarly field should seek to understand how opportunities for profit are discovered and exploited, by whom, and with what consequences. The view was in line with three perspectives given to classify various definitions of entrepreneurship: how (action), by whom (traits), and consequences (process) (see also Shane and Venkataraman 2000; Shane 2003).

smaller compared to manufacturing. Franchising often involves development of a unique and efficient operative system where service provision is industrialized and transferable to franchisees. Identification, utilization and distribution of such concepts are well suited as a subject of study in entrepreneurship.

Entrepreneurial Partnership of Franchising. Franchising is based on an entrepreneurial partnership, where the concept innovated by the franchisor is distributed to the market through a network of outlets owned and managed locally by franchisees. There are unique risks and challenges involved in the local markets and outlet locations, even though the multiplied concept is the same.

Franchisee entrepreneur. For the franchisor, franchising is a means of acquiring capital and of solving the agency problem. The franchisor's risk is linked to development of the brand, while that of franchisees is linked to development of the local markets. All environments restrict entrepreneurship, but in franchising there are clear restrictions related to changing the concept. On the other hand, the franchisee is given a relatively large amount of freedom with respect to operating in the local market. The decision-making process where a new entrepreneur chooses franchising instead of setting up a stand-alone business deserves more investigation.

Multi-unit franchisee. Multi-unit franchisees are an increasingly common phenomenon in franchising. Multi-unit franchisee is most commonly the result of expansion of individual franchise owners as they open new outlets, or a result of an area development contract. Multi-unit franchisees change the balance of power and risks in the franchisee-franchisor relationship. It is still unclear how franchisors choose franchisees as collaborative partners in different circumstances.

Kaufmann and Dant (1999) mentioned the importance of franchising for the national economy, both in terms of domestic and foreign trade, as an additional motivation for defining franchising as a separate area of research (cf. also Kaufmann 1996; Lafontaine 1996).

Stanworth and Curran (1999) regard franchising undoubtedly as a manifestation of modern economic individualism, where key cultural values typical of a competitive capitalistic system such as autonomy, independence, material rewards and even creativity are emphasized. These values have previously been linked too exclusively to traditional forms of entrepreneurship.

The strength of the entrepreneurship perspective lies in its comprehensiveness and its integrative nature. Entrepreneurship is properly suited as an approach for analyzing the phenomenon under study, both as a whole and on different analysis levels, e.g. franchisor (*organization level*), franchisee (*individual level*) and economy (*macro level*). According to the basic premise of the study, franchising is entrepreneurship, and franchising cannot appear without entrepreneurship.

The relatively short and multidisciplinary research tradition of franchising and the multi-level study of the phenomenon has produced quite a large number of individual studies that are poorly linked to each other, with too much emphasis on the franchisor point of view (see e.g. Stanworth and Curran 1999; Hoy and Stan-

worth 2003a; 2003b). Franchising studies have also been limited by the reigning paradigm (cf. Elango and Fried 1997). Franchising has been explained with the aid of common economic theories. The theories used have been separate, but complementary within a franchising context. A genuine, strong theory of franchising has not yet been developed. The model of Stanworth and Curran (1999) has been a pioneering effort to come up with such a model.

Theories, especially the oldest and the most commonly used theories explaining franchising, transaction cost theory and agency theory, have limited explanatory power, because their focus on franchising is very narrow: franchisor's choice of organization (*management perspective*) from the viewpoint of profit maximization and economic efficiency (*economics perspective*). That is why franchising, as a hybrid-form organization between markets and hierarchies, has remained without a satisfactory theoretical explanation.

Theories that are more applicable, more recent and hitherto less used in the franchising context include resource-based theory and property rights theory. The strength of resource-based theory lies in its capacity to take into account both parties involved in the business operation, i.e. the cooperation, and the complementary and synergistic nature of their immaterial and material resources in business initiation and implementation. Property rights theory (see Windsperger 2002), on the other hand, complements and deepens the resource-based theory, because it too sees the cooperation as being resource-based. Strategic and operational decision rights, ownership rights and residual income rights between the parties involved can be derived from resources. The division of rights is set down in the franchise contract, which is of strategic significance for both parties and which according to definition gives in itself rise to franchising. Property rights theory is suited for studying both business partners, and it can in principle be utilized on all levels of the model of Stanworth and Curran (1999). In addition, it focuses on the key issues of franchising as pointed out by Elango and Fried (1997), which should be given significantly more attention in future research. Putting it simply, a synthesis of resource-based theory and property rights theory takes us closer to a more comprehensive and flexible network theory, with the aid of which it may be possible to model franchising as cooperation between companies and entrepreneurs.

The acceptance of franchising as an independent and legitimate field of study will very likely strengthen its independent theoretical development in the future. It has been estimated that strong theoretical development is close at hand, as pressure has increased to come up with better, i.e. holistic, integrative franchising theories with better explanatory power. Integrating customer markets into franchising theories remains one of the challenges for the future.

4 Franchising in Finland

Franchising is a relatively recent form of entrepreneurship in Finland: it is still poorly known and recognized despite its growing importance in the global and na-

tional economy. First domestic franchise dates back to 1970's and a stream of franchises were initiated in the beginning of 1990's. Franchising grew between 1999 and 2003 nearly 15% annually. The latest usable franchising statistics from year 2003 show that there were a total of 177 franchise systems operating in Finland. Of these, 76 operated in retail, 71 in services and the remaining 30 in the restaurant sector. One fourth (n=44) of the franchise systems were of foreign origin and 75% Finnish. As many as one in five (21%) of the Finnish franchise systems had gone international, and 8% stated the intention of entering the international markets at a later date. The franchise chains had about 6,600 outlets, two thirds of which where owned and managed by a local franchisee. The total number of franchisees in 2003 was about 3,700, which corresponded to about 1.7% of active companies in Finland. The number of jobs created by franchise systems was estimated at about 46,000 (less than 2% of the Finnish workforce). Combined turnover of the franchise systems came to about €4.88 billion which is around 3.4% of the Finnish GDP) (Tuunanen 2003; Tuunanen 2005).

Franchise systems aiming at growth in the short term made up 75% of all franchise systems, and the targeted increase in the number of outlets was over 700. The high number may reflect the short tradition and early life-cycle stage of franchising in Finland, and the importance of franchising as a growth strategy. About half of the chains reported that they were in the growth phase of their life cycle, and one in five stated that they were only just entering the market. Problems in recruiting suitable franchise candidates have for many years been the biggest obstacle to strong growth in the sector. As a result of the obstacles, targeted growth has not been achieved (Tuunanen 2003, 2005).

5 Business Policy Perspective

At present there are more enterprises in Finland than ever before, a total of 230,400. The number of entrepreneurs, 213,000 (farming excluded) makes up 9% of the total workforce. The number is however significantly lower than in European countries with higher entrepreneurial activity (see Hyrsky and Lipponen 2004). In Finland, entrepreneurship seems to be commonly held in high regard, and the atmosphere promoting entrepreneurship has developed in a positive manner. Despite this, there are too few of those who choose an entrepreneurial career. Culturally, Finland is still far from an entrepreneurial society (cf. Hyrsky 2001).[14]

At the beginning of 2000, the Ministry of Trade and Industry launched an "Entrepreneurship Project", which was included in the then Government's programme. The objective of the project was to promote stable economic growth, employment and competitiveness by enhancing the establishment of new firms and the growth and development of existing companies. The project was imple-

[14] For cross-national assessment of entrepreneurial activity, see Global Entrepreneurship Monitor 2005 Executive report (Minniti, Bygrave and Autio 2005).

mented in an ongoing basis which meant that measures were consecutively initiated and applied to promote entrepreneurship and business activities (The Ministry of Trade and Industry 2002).

In 2003 the current government launched an "Entrepreneurship Policy Programme", which continued the work already done within the Entrepreneurship Project. The Ministry of Trade and Industry leads and coordinates the program. The main objectives of the program are to safeguard a stable and predictable operational environment for enterprises, to ensure that resources available for promotion of entrepreneurship in various administrative branches will be utilized to the full and efficiently and to place Finland among the top countries in Europe in terms of excellent conditions for business (Ministry of Trade and Industry 2005).

Initially a concrete objective for the Entrepreneurship Policy Programme was set. It was declared that there is a need for 90,000 new small business owners by the year 2010. The figure was based on two things. First, the government set an employment goal of 100,000 new jobs and 30,000 new enterprises were required to reach that goal. Second, it was predicted that 60,000 enterprises will undergo a transition of ownership from one generation or owner to other during this decade. Nonetheless, the objective was rephrased afterwards and the programme does not include specified targets anymore. The main focus of the programme is on concrete projects that support entrepreneurship. Responsibilities and schedules are set up for each project to help coordination process and the follow-up measures (Ministry of Trade and Industry 2005).

The contents of the Entrepreneurship Policy Programme are in line with the strategic outlines of the report "Green Paper: Entrepreneurship in Europe" drawn up by the European Commission (Commission of the European Communities, 2003).[15] The general objectives of the policy programme are included in the government agenda of Prime Minister Matti Vanhanen's cabinet entitled "Employment, entrepreneurship and common solidarity: the keys to an economic rebound". According to the government agenda, the aim of business policy is to promote economic growth and employment, to diversify production structure, to support stable regional development and to ensure the competitiveness of the Finnish economy. The aim of economic policy is to promote the establishment and growth of businesses, generation transfers and internationalization. The Entrepreneurship Policy Programme charts e.g. how entrepreneurship can be made more attractive as a career alternative, and how the operation and expansion of SMEs during the initial and growth phase as well as woman entrepreneurship can be supported. In addition, legislation will be developed so that unnecessary bankruptcies of viable businesses can be avoided (see The Government Programme of Prime Minister Matti Vanhanen's Government 2003).

The key to increased employment and generation of economic growth seems to be growth oriented entrepreneurship. It has been estimated that 3-5% of new businesses generate as many as three fourths of all new jobs created by new businesses.

[15] See also European Charter for Small Business (2000).

Sixty-one per cent of the fast growing businesses operate in the service sector, which is somewhat surprising (Hyrsky and Lipponen 2004, 35, 73).

In an international perspective, maintaining Finland's current high economic competitiveness calls for expansion of the foundation of productivity growth, so that the standard of living of the welfare society can be raised. The GDP shares of business industries with poor productivity growth are quite significant, and the industries are overly dependent on domestic demand. Such service business categories include transportation, education, business services as well as health care and social services. Harmful labor market and goods regulation should be reduced in order to increase productivity growth and openness of the economy. The greatest opportunities are probably linked to setting up entrepreneur-driven well-being services. Compared to other OECD countries, there is more regulation and lack of competition in Finland. In addition, the public sector as well as the state-owned companies makes up a large share of total production, while the share of foreign subsidiaries operating Finland is low (see Lipponen and Viitamo, 2003, 1, 9, 79-82)[16].

6 Overlapping Features of Franchising and SME Policy

Franchising does in fact have multiple linkages to today's Finnish business policy and promotion of entrepreneurship. Franchising is not presented here as a universal remedy, but rather as a mean among others for achieving goals. Several facts indicate that franchising will continue to grow in Finland in the near future as well. By fostering and speeding up this growth a number of outcomes can be achieved that have been set as objectives for business, economic and entrepreneurship policy. The following features conjoin franchising to the current business-policy.

Striving for growth. Franchising is a growth strategy enabling fast regional expansion of business. Growth is the inherent characteristic of franchising and one of the prerequisites behind its success. Regionally, franchisee-owned units are at times established peripherally, outside centers of growth. This may affect the supply and availability of goods and services in smaller towns and rural areas and therefore contribute towards a more balanced regional development. Growth firms, so called gazelles, are a rare phenomenon in Finland. About one in 600 firms, i.e. 0.17%, in Finland seems to be gazelle business characterized by fast and strong growth (Halttunen 2004, 297). Franchisors may be similar kind of growth oriented and growth intense businesses. It is necessary to state that perspectives and studies on growth enterprises have been too limited in scope. Growth has traditionally been seen only as the organic growth of firms, as growth obtained through diversification or as growth through corporate acquisitions or mergers (cf. Halttunen, 2004). The growth

[16] For nations' competitive rakings see IMD World Competitiveness Yearbook 2005 and World Economic Forum Global Competitiveness Report 2005-2006 (Porter, Schwab and Lopez-Claros 2005).

of franchising is multidimensional and occurs on various levels (Tuunanen and Koiranen 1998). The growth of the franchisor through a franchise-form hybrid organization deserves more attention, as growth can be measured immediately as new venture start-ups, not just in terms of turnover generated or jobs created.

Education and training. Franchising is learnable and teachable matter. In franchising an essential part of operation is the efficient transfer of know-how necessary for business and entrepreneurship so that a person with no or limited previous entrepreneurial background and competence is able to run a business independently (Stanworth, Price, Porter, Swabe and Gold 1995, 4-6; Stanworth, Price, Purdy, Zafiris and Gandolfo 1996, 33-34; Stanworth and Curran 1999). A characteristic feature of our young franchising culture is the fact that franchising is poorly known. That is why determined action should be taken to make franchising more widely known at educational institutions, polytechnics and universities as one of the many manifestations of entrepreneurship, not just as a distribution channel solution or a form of export in the teaching of retail and international business. Franchising awareness should also be raised among business associations and organizations, among parties promoting and supporting entrepreneurship as well as among commercial banks and financial institutions. Rapid and encouragingly promising results have however been obtained by arranging franchise entrepreneurship training programs for the unemployed by TE-centres (Torikka and Tuunanen 2003; Torikka 2004; Torikka and Tuunanen 2005). Strengthening the supply of franchisees is pertinent, bearing in mind that the factor limiting the growth of franchising most strongly at the moment is lack of appropriate candidates (Tuunanen 2002).

Franchising lowers the threshold to entrepreneurship. Earlier studies have shown that franchising creates entrepreneurial career opportunities for persons who do not necessarily pose the prerequisites required for self-employment and who would not become small business owners if franchising was not available as an option (see Stanworth and Curran 1999). The initial training and continuing support services provided by the franchisor, in addition to a pre-tested business concept that may be based on a well-known trade name, lower significantly the threshold to become a small business owner. Franchising increases entrepreneurial opportunities in society by increasing the number of potential self-employed.

The birth of vital new firms. The growth aimed at by the franchisor occurs in cooperation with the franchisees. Growth gives rise to new ventures. The entrepreneurial risk of franchised enterprises has been claimed to be considerably lower than that of other SMEs, because the survival rates of franchisees' ventures are higher. Franchising may thus lower mortality among new enterprises. According to statistics, 53% of enterprises established in Finland have ceased after the first five years of operation (Hyrsky and Lipponen 2004). It has been estimated that the corresponding figure for franchise ventures is around 10-12%. Franchising gives rise to new enterprises, and they are often based on a healthy and vital foundation.

Women entrepreneurship. Studies show that franchising creates entrepreneurial opportunities for women in particular. Several reasons have been given for this: business industry explanation, risk-taking propensity, family or couple based entrepreneurship and the versatile support provided by the franchisor (Tuunanen 2002). If there is an aim to promote womens' self-employment in particular, franchising offers one avenue. This is closely linked to prevailing entrepreneurial growth potential in the service sector.

Internationalization. Besides being a growth strategy, franchising is also a form of internationalization. Internationalized Finnish franchise systems generate export income for our country. Studies show that Finnish franchisors have been active in their internationalization efforts, and the number of those who are planning to go international in the future is relatively high. According to statistics of tax authorities, only some 3.5% of all firms in Finland are export firms (see Hyrsky and Lipponen 2004, 71). Promoting franchising would thus also indirectly increase enterprises' internationalization. In terms of internationalization, increased attention should be focused on the markets close at hand, the Nordic countries, the Baltic area, Central and Western Europe. Russia is however the area that merits special attention. Compared to the domestic Finnish market, the metropolitan areas of St. Petersburg and Moscow make up a market that is more than three times larger, and its purchase power is increasing all the time. Finnish companies have a number of advantages when it comes to making use of the Russian market (see Koiranen and Tuunanen 1996; Tuunanen and Koiranen 1998; Anttonen and Tuunanen 2004; Anttonen, Tuunanen and Alon 2005).

Franchising creates efficiency and competition. The service sector offers the greatest potential for productivity growth as well as an increase in franchising in Finland. Deregulation and opening up public sector service provision for private companies and competition is crucial. Many well-being, social, healthcare, elderly and housekeeping services as well as personal services can be provided, and are already partly provided by the private sector. In the United States, for example, these services have in recent years been among the fastest growing business categories in franchising. There is no reason to doubt why this could not happen in Finland and other Western countries that have experienced World War II and where the relative proportion of elderly people is constantly growing.

Generating new franchise businesses. New innovative franchise concepts can be innovated in Finland, in addition to which they can be imported here by contract. Alternatively, they can be imitated and adapted to the domestic market. New concepts can also be based on the utilization of high technology and be information/competence-intensive in nature (e.g. people working in expert professions).

Young Finnish franchising culture. The gap in the franchising knowledge and competence in our country has been a fact, although there has been some improvement as franchising has grown. Increased awareness and strengthened competence promote the growth and success of franchising. Since franchising penetration in our country is lower than in the comparative countries, there seems to be

unexploited potential. Lack of appropriate future franchisees is in particular a factor that limits faster growth of franchising in our country.

The special characteristics of franchising listed above are features that make franchising as a multifaceted form of entrepreneurship worthy of more attention in research, education and the business policy applied. The list shows several potential areas where franchising can be utilized to foster SME activity in the Finnish economy. There are many linkages between inherent features of franchising and present business policy and its goals.

7 Discussion and Concluding Remarks

Based the foregoing sections, the following argument can set forth:

Franchising and entrepreneurship are overlapping domains. Although much of the success of franchise organizations is due to routinizing procedures and replicating models, there is a body of evidence documenting creativity and innovation within franchise systems. The creation and growth of a franchise network is an entrepreneurial act. Franchise organizations foster environments for innovating on a small scale, followed by cost efficient implementation of the innovation throughout the system. Most importantly, franchise organizations have proved to be major wealth creators for both franchisors and franchisees. And this wealth is often reinvested in other productive means within a society.

Governments encourage entrepreneurship initiatives that support economic development. For example, the European Union has made improving the culture for entrepreneurship a cornerstone of the strategy for long-term economic progress in the trading block. The "European Charter for Small Business" was adopted in 2000. The Charter is a policy framework for sharing best practices and benchmarking progress in stimulating the formation and growth of small businesses. In this paper attention has focused on the case of EU member Finland to demonstrate how one country is attempting to increase the number of individuals who choose to engage in entrepreneurial careers. Finland is an especially interesting laboratory for investigating entrepreneurship policy initiatives because prior studies have shown that Finns have among the lowest rates of entrepreneurial orientation of any developed country.

Franchising possesses unique characteristics for stimulating entrepreneurial activity. As explained in the previous section, there are several features of franchising that indicate a role for this phenomenon is economic development. Growth, education and training, opportunities for women and minorities, and increased efficiencies in business channels are among many obvious attractive characteristics. Let's consider just two typical objectives of economic development policies: job creation and international competitiveness. First, it is well established that healthy economies are characterized by large numbers of venture start-ups and by an envi-

ronment in which gazelles, i.e. rapidly growing firms, can excel. New jobs are created by both groups. Also, because they operate from detailed operating manuals, franchise organizations are typically employers of first resort, offering entry level jobs to individuals with limited experience or skills. Second, franchises frequently serve as incubator organizations, helping inexperienced store employees and managers acquire knowledge and skills that they may transfer subsequently into their own ventures. Further, other prospective entrepreneurs may create ventures that become part of the supply chain for the franchises. Part of the natural progression for franchise systems and their supply chain partners has been growing to a saturation point in domestic markets, and then expanding internationally, applying a model of proven success.

Few public policy officials have recognized the potential for impacting economic development that franchising has. One reason for this omission may be the failure to perceive franchising as an entrepreneurial activity. In this paper an attempt to remedy that failure has done by defining the entrepreneurial nature of the franchise form of business organization. Although this conclusion may be self-evident based on prior research, the argument to date has not been successful in enlightening policymakers to the extent that they have incorporated franchise formation and growth into entrepreneurship development policies. Thus, it is proposed future research efforts that explicitly examine the effects of franchising on job creation, wealth formation, and internationalization of domestic enterprises as a start in this direction.

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Creating Franchised Businesses Through Franchisee Training Program – Empirical Evidence from a Follow-up Study

Jenni Torikka[1]

Abstract. The Finnish franchisee training program was a unique training program since it was government financed and provided to prospective franchisees by a third party. The organizing parties were the Finnish Employment and Economic Development Centres and a private consultation company specialized in franchising. The training program aimed to find people interested in becoming franchisees and to give them the essential skills and knowledge a franchisee needs.

Since the mid-90s the number of franchises operating in Finland has been growing around 15% yearly and the growth is expected to continue in future. Nevertheless, franchisors have indicated difficulties in finding and recruiting franchisees, representing the most significant obstacle to growth. Franchisee training program served as a get-together venue for franchisors and people interested in buying a franchise. In total more than 200 trainees completed the ten programs held in 1999-2001. Those trainees comprise the initial sample of this follow-up study. The data was collected with phone-interviews and the usable data consisted of 143 responses i.e. 70 percent of the initial sample. The purpose of the study is to analyze the effectiveness of the franchisee training program as a part of the career decision-making process of the trainees. The study concentrates on those trainees who established a franchised business (n=24) or started or bought a stand-alone business (n=22) after the training. The results are interesting and encouraging – the impact of the training program was positively associated with becoming a franchisee or a stand-alone business owner. Moreover, a logistic regression analysis showed clearly that measures pertaining to effectiveness of the training program predicted becoming a franchisee.

Keywords. Entrepreneurship education, training, effectiveness, franchisees

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1 Introduction

The need for new franchisees continues to be the most severe growth barrier for franchise chains in Finland. Franchisors face problems in finding and recruiting proper franchise owners for their expanding systems. Indeed, while entrepreneurship seems to be appreciated in the society, only few people set up a business. The situation is the same in whole Europe except the southern parts of the continent, where entrepreneurial activity is higher (cf. Green Paper: Entrepreneurship in Europe). At the beginning of 2000, the Finnish Ministry of Trade and Industry launched an Entrepreneurship Project, which was included in the then government's programme. The objective of the Entrepreneurship Project was to promote stable economic growth, employment and competitiveness by enhancing the establishment of new firms and the growth and development of existing companies. The current government continued the work and set promotion of entrepreneurship as one of the top priorities in its program in 2003. For this purpose, the Ministry of Trade and Industry launched an implementation plan for the Entrepreneurship Policy Programme which was a continuum for the Entrepreneurship Project. The programme's objectives are to ensure stable development of the business environment of enterprises and to raise Finland among Europe's leading countries in terms of the operating conditions for entrepreneurship (Ministry of Trade and Industry 2004).[2]

In order to allocate the scarce public resources in a best possible way to promote entrepreneurship, the activities under the policy programme should be evaluated and their results disclosed. Even though not mentioned in the policy programme, the franchisee training program presented in this paper was one of the government funded activities to foster entrepreneurship. To assess the outputs of the training program, it is essential to gauge its effectiveness. Objective information on the outcomes of the training program is therefore valuable to numerous stakeholders such as the government, the Ministry of Trade and Industry and other small business policy makers as well as to franchisors and prospective franchisees.

To be able to evaluate the impact of public policies their objectives should be specified in a quantitative manner in the form of targets. However, many governments do not follow that (Storey 2000). The Finnish government is not an exception. Initially, the Minister of Trade and Industry outlined concrete objectives for the entrepreneurship policy programme (Pekkarinen 2003). Nonetheless, the objectives were rephrased afterwards and no specific targets were included in the programme. The set clear target would have enabled the impact of the policy to be evaluated and further, the successfulness of it to be judged (see Storey 2000). The current follow-up study aims to analyze the effectiveness of the franchisee training

[2] The objectives of the policy programme coincide with what has been reported from other European countries, for example U.K. See Curran (2000); Storey (2000); Laukkanen (2000); Henry, Hill and Leitch (2004).

program and indirectly contribute to evaluating the impact of the entrepreneurship policy programme.

The study is related to 'creation of the franchising relationship', which is one of the three main streams of franchising research defined by Elango and Fried (1997). They suggested topics for future research and brought up a need for studies on training. Furthermore, this study adds to the discussion on a decision-making process of a person exploring franchisee career option. Research on the decision-making process of becoming an entrepreneur is diverse whereas studies on an equivalent process of a potential franchisee are scarce. For instance, Stanworth and Kaufmann (1996), Price (1997), Kaufmann and Dant (1999) and Stanworth and Curran (1999) have brought this out.

The paper begins with an introductory section that starts off with a brief overview of franchising in Finland. In addition, the franchisee training program is depicted. Following, discussion on the theoretical context for entrepreneurship education, evaluation of the impact of the education and franchisee career choice decision is portrayed. Then research design is described and the empirical results of the survey are presented. The paper concludes with a discussion, implications and recommendations for future research.

2 Background

2.1 Franchising in Finland

A breakthrough of business format franchising appeared in Finland in the late 1980s when a stream of franchises was founded and the national franchising association established. The first known business format franchise in Finland started its franchising operations in the late 1970s (Tuunanen and Hyrsky 2001). Yet today franchising is rather novel and under-recognized form of entrepreneurship in Finland.

Since the mid-90s the number of franchises operating in Finnish markets has been growing nearly 15% yearly. The latest 2003 statistics indicate there being 177 franchises with more than 6,600 outlets. Two thirds (67%) of the units are franchisee-owned whereas one third is company-owned. Majority of the franchises are retailing (n=76) and service (n=71). In addition, 30 franchises operate in the fast food, café and restaurant sector. Three quarters of the franchises originate from Finland. According to 2003 statistics, franchising employs nearly 46,000 people and generates a gross annual turnover of 4.88 billion EUR. Franchising accounts for around 3.4% of the gross domestic product (GDP), and merely 1.7% of all active and registered companies in Finland is franchised. The upward progress of Finnish franchising is expected to continue for several reasons. For instance, the growth continued despite the years of recession in the early 90's and there is room for new franchises particularly in consumer and business-to-business services. In addition, one out of five (21%) franchises indicated being in the "market entry-

phase" of their lifecycle. Franchisors operating in the market pointed out a need for several hundred new franchisees in the year 2003 (Tuunanen 2005). Lack of proper candidates is perceived by the franchisors as the most severe factor restraining the growth of franchising (Macmillan 1996; Tuunanen 2003). If the growth of franchising continues as estimated, the number of franchises in Finland will exceed two hundred in 2005.

2.2 Franchisee Training Program

The franchisee training program was created in the late-90s. The program was developed to find people interested in franchising and to give them the essential skills and knowledge a potential franchisee needs. The organizing parties behind the training were the Finnish Employment and Economic Development Centres[3] (T&E Centres) in (T&E Centres) in the three major cities Helsinki, Turku and Tampere. A private company specialized in franchise consulting took responsibility for the implementation. The training programs were partly supported by the European Social Fund (ESF). The rest of the finance was provided by the T&E Centres. The programs were open to everyone interested in franchising. Moreover, there were no capital requirements for the applicants. Trainees were charged a nominal fee of 170 EUR to cover studying materials. The first two training programs were organized in 1999 in the capital city Helsinki. By the end of 2001, ten programs had been completed with close to 200 participants finishing the program. This study concentrates on the first three years when the ten programs were organized uniformly. From the beginning of 2002, the format of the training was changed considerably and therefore, the programs arranged subsequent to that were not comparable to the first ten programs. For that reason, trainees who completed the training after 2001 are not included in the current study.

The training programs were advertised in national and regional newspapers and those interested were able to learn more about them in the T&E Centres and local employment offices. The applicants went through a selection process that included a written application and interviews. Even though some of them were not selected for the training, they might have been predisposed to franchising and considered becoming franchisees or stand-alone small business owners. Approximately 20-25 participants were selected for each program. The backgrounds of the trainees were rather heterogeneous. A part of them had regular full-time or part-time job, some were unemployed and looking for a job, some were students and some even ran their own businesses when entering into the program. Nevertheless, none was a franchisee. Despite the dissimilar starting

[3] The Ministry of Trade and Industry, the Ministry of Labour, and the Ministry of Agriculture and Forestry supply their regional services from one office – the Employment and Economic Development Centres (T&E Centre).

points, a common feature uniting the participants was the interest in starting a franchised business.

The programs were introduced to franchisors operating in Finland and they were given a chance to present their franchise offerings and to meet the trainees. Especially for franchisors recruiting new franchisees, participation in the programs was a useful avenue for targeting capable candidates. A noteworthy feature of the Finnish market is a shortage of events where franchisors and potential franchisees can meet. Most often franchisors seek franchisees via advertising in national newspapers. The domestic market is small with 5.2 million inhabitants. Unlike in larger EU countries or the USA, there are no franchise fairs and expositions. A further indication of the significance of franchisee training programs is that in a franchise relationship the franchisor is responsible for arranging initial and on-going training for the franchisees. Nevertheless, most franchisors do not have enough resources to arrange in-depth training on entrepreneurship and franchising for their new franchisees (Libart ltd. 1998). Instead, they tend to concentrate on system specific training.

For the trainees the program was approximately five months period of reflection and decision-making, during which many of them decided whether they want to become franchisees. A typical training program consisted of 20-25 day classroom instruction period, distant learning and self-studying exercises, and individual consultation. Franchising experts (e.g. consultants, attorneys) and professionals in various subjects (e.g. accounting, entrepreneurship, human resources, and marketing) served as lecturers. Each program taught a standard curriculum. The lecturers aimed to provide the participants with a realistic view of the time, financial and skills demands of franchise ownership. During the course of the lectures, the advantages[4] and disadvantages[5] of franchising were discussed.

The training started with classroom lectures and a self-studying period which lasted nine to fourteen weeks. This phase included three to five one-week breaks for distant learning and assignments. Classroom instruction was normally given two to four days per week. Assignments were related to various topics (e.g. bookkeeping, payroll, value added tax, business taxation) and completion of exercises was required. Every trainee was expected to choose one franchise according to his or her own preference and to compose a detailed case analysis of it. The goal of the analysis was to learn to evaluate various franchise offerings and to gather the necessary information for deciding whether to buy a franchise or not. Based on the participant's needs and wishes, she or he was given personal consultation lasting up to two days. Appointments with a franchising consultant, a franchise attorney and a career tutor were arranged upon a trainee's request. Generally, the first con-

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[4] For franchisee advantages see e.g. Hunt (1977); Stanworth, Curran and Hough (1984); Knight (1986); Peterson and Dant (1990); Dant (1995); Stanworth and Kaufmann (1996); Price (1997); Kaufmann (1999).

[5] See e.g. Hunt (1977); Carman and Klein (1986); Brickley and Dark (1987); Justis, Olsen and Chan (1993); Floyd and Fenwick (1999); Tuunanen and Hyrsky (2001).

sultation meeting took place after the classroom and self-studying phase. The meeting involved a feedback interaction and discussion on the trainee's career path and options. Moreover, the trainee and the consultant together designed the following action. Those who clearly indicated an interest in buying a franchise received further advice and guidance as to the negotiations with franchisor, the franchise contract, start-up investments, financing, spreadsheet and other relevant issues related to the franchise offering and business plan.

3 Theoretical Framework

The theoretical underpinnings of the study are discussed in the following order: first, entrepreneurship education and training; second, effectiveness of the entrepreneurship education and training; and last, the decision-making process of becoming a franchisee. The third issue is dealt in the wider context of becoming an entrepreneur.

3.1 Entrepreneurship Education and Training

Increasingly recognized and discussed in the western market economies during the past ten to twenty years is the role of entrepreneurship enabling change and development. As for instance, Johannisson (1991), Garavan and O'Cinneide (1994), Curran (2000), Laukkanen (2000), Westhead, Storey and Martin (2001), Gibb (2002) and Henry, Hill and Leitch (2004) have noted, policy makers and others have come to view small and medium-sized enterprises as important sources of jobs, innovation and growth. The growing interest has been accompanied by an increased level and variety of public and private sector policy initiatives at local, regional, national and international scales to stimulate and support the development of the sector. One of the initiatives is entrepreneurship education and training. There has been a raise in the number and type of such programs and courses but there are some challenging issues related to them.

Gibb (2002) brought up the major perceived problems in responding to the challenge of entrepreneurship education and took mainly a European perspective[7]. He saw that the key trigger for the growing interest in entrepreneurship is globalization. According to him, we are faced with more uncertainty and complexity and there is a need for entrepreneurial behaviour in wide range of tasks in the community. More-

[7] Gibb (2002, 235-243) discussed on number of problems under the following headings: the entrepreneurial concept, academic acceptability, client segmentation and needs, organization of knowledge and pedagogy, teacher supply and competency, evaluation and assessment, location and capacity of delivery vehicles, funding. Others who have addressed the matter are for example, Ronstadt (1985); Johannisson (1991); Garavan and O'Cinneide (1994); Laukkanen (1997a, 1997b, 2000); Levie (1999); Menzies and Gasse (1999); and Cox, Mueller and Moss (2002).

over, entrepreneurship education should be given also elsewhere than in business schools. Gibb (2002) made a point that despite the growing rhetoric of the policy makers on the importance of entrepreneurship, there would appear to be no common agreement as to what pursuit of entrepreneurship and the enterprise culture means. For instance, he asked whether the entrepreneurship education provides the skills and knowledge an entrepreneur needs in today's uncertain and complex environment. He was also concerned about what is taught under the umbrella of enterprise and entrepreneurship, the ways entrepreneurship is taught, to whom it is taught, and what are the needs of the different "client" groups of entrepreneurship courses and programs. Further, he had reservations about the competency of teachers of entrepreneurship and teacher supply, methods used in evaluation and assessment of programs and courses as well as the design of delivery organizations. Finally he pointed out the funding of entrepreneurship education and possible impacts that the different sources might have on the education provided.

The current study is concerned with a unique entrepreneurship education program that aimed at introducing one form of entrepreneurship i.e. franchising to everyone interested in starting a franchise business and in that way enhancing entrepreneurship in the society. The study focuses on evaluation and assessment of the impact of entrepreneurship education programs, one of the problems mentioned by Gibb (2002).

3.2 Effectiveness of Entrepreneurship Education and Training

Scholars of different disciplines, say pedagogy, economics and psychology, have shown that the effectiveness of education is a multifaceted and controversial phenomenon. For instance, as Orser and Hogarth-Scott (1998) found, the assessment of education and the perceived value of its outcomes may be dependent upon the stakeholders (i.e. trainers, delivery agents, public policy makers, business owners and employment equity groups) vested interest in the education. Vaherva (1983) added that effects of education can be seen in the functioning of those educated and the surrounding society and which last as long as the following generation. Besides, according to his view, the impact analysis should not be limited merely to outputs. Rather, the costs and other inputs of education, educational process and immediate results should be taken into consideration and be brought into relation with the final goal-oriented outcomes. Furthermore, as McMullan, Chrisman and Vesper (2001) noted, outcomes of an education or training program typically have multiple causes, only one which may be the impact of a program.

While there is an agreement on the importance of determining the effectiveness of entrepreneurship education and training programs, conducting evaluations can be problematic (see e.g. Curran 2000; Storey 2000; McMullan et al. 2001; Cox, Mueller and Moss 2002). Vaherva (1983) and Mikkonen (1997) put forward that primary or immediate, secondary and even tertiary effects of education can be measured. Participants' satisfaction or reactions is the first level, learning the sec-

ond and changes in their behaviour (i.e. have those educated being able to apply the learned skills in practice) the third. Measuring the bottom-line effects is demanding, time consuming and requires following the whole process and determining the expected or desired effects already beforehand. In the same way, Storey (2000) saw that evaluation is not possible unless clear and measurable objectives are specified. According to McMullan et al. (2001) the best methods for program evaluation are those that directly relate program outcomes to program objectives.

Storey (2000) differentiated between monitoring and evaluation. According to him, monitoring relies upon the views of the recipients of the scheme, whereas evaluation seeks to compare the views and performance of the recipients with other groups of individuals or enterprises. McMullan et al. (2001) dealt with three types of evaluation measures: respondents' subjective assessments on their satisfaction towards the education or training program, respondents' attributions of the impact of the education or training program to their subsequent performance, and objective measures. They indicated that subjective approach has been used in various studies and many evaluations will continue to employ it. They also saw that subjective and objective measures gauge different constructs and advised program evaluators to be particularly careful in selecting the measures and making inferences for the findings. Westhead, Storey and Martin (2001) agreed with McMullan et al.

McMullan et al. (2001) suggested that subjective variables would be used in concert with objective and attribution variables to estimate impact. Storey (2000) discussed several problems with attribution measures such as the difficulty for respondents to provide accurate estimates especially after a long lapse in time, and a potential tendency among respondents to provide answers they think the questioner wants to hear. He also noted that attribution measures do not necessarily have anything to do with performance. On the other hand, the use of objective performance measures of the firms is difficult if none of the participants of an education or training program establishes or acquires a company after the program. This problem was recognized by McMullan et al. (2001) and Westhead et al. (2001). The findings of McMullan et al. (2001) showed a correlation of attribution measures with objective measures. Thus, they proposed that attribution measures focusing on specific outcomes, used in concert with objective measures, might help in strengthening an argument of a causal link between education or training program and performance.

Time also plays a significant role in assessing effectiveness or impact of education and training programs. There might be an interval between subjective evaluations of effectiveness and objective impact. Chrisman and Katrishen (1994) suggested that one-year time lag is sufficient to show impact, but as proposed by Chrisman and McMullan (2000) later, one year may not be sufficient to capture *all impacts* of education. The possible influence of a time lag should be taken into consideration in both cross-sectional and longitudinal studies. As recorded by Henry et al. (2004) related to time is also the problem of "mortality" of those being studied.

The use of a control or comparison group in assessing the impact of entrepreneurship education and training programs has been widely discussed in prior research.

Many scholars (e.g. Garavan and O'Cinneide 1994; Storey 2000) advocate using control groups. They see it as the way to estimate what would have happened had those educated not taken part in training. However, several problems exist in using control groups and they relate to matching and selection. To put simply, perfect matching upon all chosen criteria simultaneously can be difficult and even though the matching characteristics of the two groups are kept constant, there may be other ways in which they differ. For example, as Storey (2000) and Henry et al. (2004) noted, those individuals attending education or training programs might be more motivated, better educated or more open to new ideas. In these cases self-selection to the education or training might take place. Another source of bias can occur when participants are selected to the education or training program. If there is competition, selectors will have to choose between applicants and they will select the ones who appear the best. The performance of the selected group is likely to be superior to that of the control group since better candidates have been chosen. Henry et al. (2004) observed one more source of bias in comparison of the groups: the possibility of exits of the participants during the course.

Prior research has brought up the fact that while designing the methodology to evaluate programs and courses may be comparatively easy, it is difficult to ensure that the approach adopted is actually valid. Therefore, it can be said that Wyckham's notion 'no universally accepted criterion to evaluate the effectiveness of entrepreneurship education and training programs has yet been identified' from year 1989 still holds true. In the current study subjective, attribution and objective measures were applied. However, no control group was used since the trainees were contacted subsequently concluding the program and naming a control group afterwards would not have served the purpose. Moreover, due to the unique nature of the program, the problems related to matching and selection would have been very difficult to overcome.

3.3 The Decision-Making Process of Becoming a Franchisee

Subsequently the decision-making process of becoming an entrepreneur is discussed first in general terms and then from a point of view of a franchisee. The latter is based on the notion of franchising as a form of entrepreneurship. The study of entrepreneurship spans a wide range of fields including decision sciences, economics, management, sociology and psychology. Thus, entrepreneurs and their behaviour have been examined from different disciplinary angles. Entrepreneurship has also been seen as a process[8] and a career[9]. However, no consensus exists

[8] For instance, Moore (1986) and Bygrave (1989) have discussed about entrepreneurial process.

[9] Entrepreneurship as a career has been studied by e.g. Katz (1994); Dyer (1994); Henderson and Robertson (1999); Feldman and Bolino (2000); Carter, Gartner, Shaver and Gatewood (2003).

of the exact meaning of entrepreneurship and the role of entrepreneurs (see e.g. Amit, Glosten and Muller 1993; Gibb 2002; Chell 2001; Grant and Perren 2002). Nor it is known whether there is an essential set of entrepreneurial characteristics and what that set is or what are the factors that induce entrepreneurial activity. None of the various perspectives taken has been able to answer those questions[10].

Huuskonen (1992) saw the earlier perspectives to the process of becoming an entrepreneur as explaining entrepreneurship from outside[11]. Therefore, he made an attempt to create a more comprehensive model considering the process from a person's subjective point of view. According to him, background factors (e.g. work experience in a small business, entrepreneurial parents or other role models, family business) give potential entrepreneurs a set of values, knowledge, attitudes and abilities that affect their orientation on the career path. Furthermore, personal factors (e.g. personality, locus of control, risk bearing attitudes, need for achievement, power and autonomy, values and attitudes) explain why different people evaluate entrepreneurship in different ways and have varying interpretations of their business environment. As a result of learning and socialization processes they have internalized the norms, ideas and behavioural patterns they follow.

Huuskonen (1992) summarized his analysis as follows. Entrepreneurship requires a delicate balance of the person and the environment for the intention to become an entrepreneur to develop. Throughout the decision-making process the perception of the utility of the entrepreneurship must be maintained. This means that neither the perceived external opportunity nor the motivation of the actor may disappear. Otherwise, the process will be slowed down or halted. In his model, Huuskonen (1992) brought out that if a person gives up the intention to become an entrepreneur the negative decision might not be permanent. The decision connects back to background, personal and environmental factors and the process may start again later. The findings of Huuskonen are by and large congruent with Bird (1989).

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[10] Becoming an entrepreneur has been investigated e.g. from the following perspectives: *the trait model* McClelland (1961); Brockhaus (1982); Bandura (1986); Chell (1986); Stanworth, Stanworth, Granger and Blyth (1989); Cunningham and Lischeron (1991); Cooper and Gimeno-Gascón (1992); Caird (1993); Curran and Blackburn (1994); Vesper (1996); Miner (1997); *the sociological approach* Gibb and Ritchie (1982); Chell (1986); *structural location theory* Lundmark and Malmberg (1988); *economic rationality approach* Mäkinen (1977); Julien (1988); Hébert and Link (1989); *network approach* Birley (1985); Johannisson (1995); Low and MacMillan (1988); Curran, Jarvis, Blackburn and Black (1993); *the models of new venture performance* Sandberg and Hofer (1987); McDougal, Robinson Jr. and DeNisi (1992); Sapienza and Grimm (1997); Ensley and Spencer (1997); *contingency theory approach* Lawrence and Lorsch (1967); Gilad and Levine (1986); Bings and Jennings (1986); Storey (1991); Reynolds (1992); Tervo and Niittykangas (1994); Armington and Acs (2002). Author notes that the given list is by no means comprehensive.

[11] Deterministic perspective – an individual and his/her actions are determined by the situation or environment in which he/she is located. See Burrell and Morgan (1989, 6).

Franchising is a form of entrepreneurship and several franchising scholars have recognized that the decision-making process of becoming a franchisee is related to the process of becoming an entrepreneur (see e.g. Bradach and Kaufmann 1988; Price 1997; Kaufmann 1999; and Williams 1999). The decision to become self-employed versus to pursue some other career option precedes the decision between self-employment and franchise ownership. However, as noted previously, research on the decision-making process of becoming an entrepreneur is diverse whereas studies on an equivalent process of a potential franchisee are scarce (see e.g. Stanworth and Kaufmann 1996; Price, 1997; Kaufmann and Dant 1999; Stanworth and Curran, 1999). Following are some of the key findings on the process of becoming a franchisee.

Kaufmann and Stanworth (1995) found that the persons with a history of self-employment will be more interested in becoming franchisees than persons without such history. Later, Kaufmann (1999) discovered that the greater the importance attached to financial and business (e.g. proven brand name, franchisor support) benefits of franchising, the more likely is the purchase of a franchise compared to establishing a stand-alone business. Meanwhile, Williams (1999) observed that entrepreneurs are more likely to adopt the franchise contractual form the more education and work experience they possess, and the fewer years of previous business experience. Nonetheless, he stressed that entrepreneurs' valuation of franchisor-supplied inputs diminish with their ability to contribute inputs of the same type and quality i.e. the higher their skill level in the particular business sector is. Entrepreneurs are also more likely to adopt the franchise form the greater their financial capital and the more risky the industry. Spinelli (1994) provided a formula for the choice between a franchise and a stand-alone business. He noted that franchise decision is appropriate when the present value of the increased net income from the value of the franchise trademark is either equal or greater than the franchisee fee and the present value of royalties.

Price (1997) applied career approach to franchisee buying decisions. He presented two sets of variables influencing the propensity to become a franchisee, the antecedent variables (e.g. social network, life stage and prior employment experiences) and the career choice process. Further, he emphasized the meaning of culture stating that the antecedent variables are culturally embedded and permeate the individual's career choice procedure.

In addition to the franchising studies mentioned above, the decision-making process of becoming a franchisee might have been discussed in studies concerning franchisee recruitment and selection.[11] What is more, as noted for instance by Kaufmann and Stanworth (1995), Price (1997), Kaufmann (1999), and Guilloux,

[11] See e.g. Bernstein (1968-1969); Wattel (1968-1969); Tatham, Bush and Douglas (1972); Hunt (1977); Knight (1984); Brannen (1986); Weinrauch (1986); Schell and McGillis (1990); Withane (1991); Schell and McGillis (1992); Justis, Olsen and Chan (1993); English and Hoy (1995); Hing (1995); Kaufmann and Stanworth (1995); Stanworth (1995a); Macmillan, (1996); Morrison (1997); Stanworth and Kaufmann (1996); Price (1997); Jambulingam and Nevin (1999); Tuunanen (2002); Clarkin and Swavely (2003).

Gauzente, Kalika and Dubost (2004) consideration of the advantages and disadvantages of franchising are part of the potential franchisee's decision-making process. According to Tuunanen and Hyrsky (2001) the advantages that franchisees encounter in operating their businesses are actually the same ones that motivate people to buy a franchise. These business boons and motivational factors include 'recognized trade name', 'proven business concept', 'ease of entry', 'ongoing franchisor support', 'training' and 'reduced risk of failure'.

Concluding from the prior literature on entrepreneurship and franchising it can be said that no individual factor or even a group of favourable background, personal, environmental and situational factors will make a person to become an entrepreneur or a franchisee. Becoming an entrepreneur or a franchisee seems to be a process which varies by person by duration and relating factors. The process can be paused or steps forward and backward can be taken at anytime for various causes. Likewise, the final step, an establishment or acquisition of a business may or may not take place. An entrepreneurship education or training such as the franchisee training program might be part of the decision-making process to become self-employed and/or franchisee. The training program may have created an intention, strengthened it or even acted as a triggering event in the process leading to a person's entrepreneurial decision.[13] Yet, besides the training program, it is likely that there were many other factors influencing the trainees' situations and decisions. Therefore, the program hardly made any franchisees or stand-alone small business owners on its own. In the empirical part of the study some of the background factors (such as previous nearness to entrepreneurship via role models, family business and work experience in a small business) were examined.

4 Research Design

4.1 Scope of the Study

In understanding the context of the franchisee training program, it is essential to recognize the differences between forms of franchising. In Europe, only Business Format Franchising is regarded as franchising. Consequently, when discussing franchising in this article, only Business Format Franchising is considered.

The term entrepreneur does not refer here to a highly creative venture based on a new and novel product and service. Instead, it is used in a more everyday sense and is meant to be interchangeable with the term self-employed or small businessman/-woman.[14] Furthermore, in this article expression entrepreneurship edu-

[13] The notion of triggering event was introduced by Shapero (1984).

[14] Entrepreneurship and entrepreneurial in the English language are often qualitative statements of people who take care of their firms in a certain way. In contrast *yrittäjä* (noun) and *yrittäjyys* (adverb) in the Finnish language simply refer to being in business. These words have no clear connotations of being oriented towards growth, being successful,

cation and training programs is used to refer education targeted to people interested in becoming entrepreneurs, self-employed or small business owners.[15]

Approach applied in this study is to consider franchisees as entrepreneurs[16] (see e.g. Stanworth 1995b; Shane and Hoy 1996; Stanworth and Kaufmann, 1996; Hoy and Shane, 1998; Kaufmann and Dant 1999; Stanworth and Curran 1999; Hoy, Stanworth and Purdy 2000, Hoy and Stanworth 2003; Spinelli, Rosenberg and Birley 2004). Over the past years, several contrary statements have been presented against the view (see e.g. Rubin 1978; Norton 1988; Anderson, Condon and Dunkelberg 1992).

4.2 Data Collection

The study on the effectiveness of the Finnish franchisee training program is a follow-up study. It is an independent, academic study that is not related to the organizers of the program. The first phase was carried out as a mailed survey while phone interviews were utilized in the second phase. The 214 participants of the programs 1-10 were chosen as respondents for the first phase. The respondents of the survey, 176 persons, were targets of the phone-interviews. The programs 1-10 were organized during 1999-2001. A broader description of the franchisee training program including its background is given and results of the first phase of the follow-up study are reported in two published previous articles by Torikka and Tuunanen (2003), and Torikka (2004).

Data for the present study were gathered with phone-interviews. Those respondents of the mail-survey who participated in the first five training programs were interviewed in fall 2003 and the ones who completed programs 6-10, in the beginning of 2004. In total, 152 responses were obtained. Nine answers came from people, who were stand-alone small business owners when entering into the program, during the program as well as afterwards. They continued running the businesses and no changes took place in their professional statuses in either phases of the follow-up study. Hence, it seemed they had made their career decisions already and that they were in a different position than the

admirable or anything of the like. The authors agree with Huuskonen (1992) in that being growth-oriented or opportunistic are not sufficient criteria to define an entrepreneur. The empirical fact is that entrepreneurs cannot be distinguished from the general population or business managers that way. International comparisons are difficult, because the core term entrepreneurship is very culturally oriented (Huuskonen 1992, 194).

[15] Previous research has introduced several expressions on education aimed at people interested in becoming an entrepreneur or a small business owner or a self-employed. Terms such as entrepreneurship, entrepreneurial and small business ownership are attached to words education, training, course and program. Additionally, notions formed might have different meanings in different countries and cultures.

[16] Relating to this is the notion that research in franchising is part of the field of entrepreneurship. See e.g. Shane and Hoy (1996); Kaufmann and Dant (1999); Hoy and Stanworth (2003); Spinelli, Rosenberg and Birley (2004).

sions already and that they were in a different position than the rest of the respondents. In their case, the training program could be seen as a small-business assistance program rather than an entrepreneurship education or training given to people interested in becoming entrepreneurs. These nine responses were left out from the analyses and thus, the usable data consisted of 143 responses. Consequently, the response rate was 86% in the second and current phase of the follow-up study (70% of the sample of 205).

4.3 Career Decision-Making

The present study concentrates especially on those trainees who established a franchised business or started or bought a stand-alone business after the training program. This focus was chosen because the ultimate aim or idea of the training program was that the trainees would become franchisees. Additionally, in order to investigate the career decision-making process of the respondents, their entrepreneurial backgrounds and related experiences were explored. Besides the two groups of focus in the current study, franchisees and stand-alone small business owners, there were two other noteworthy respondent groups, salaried employees and unemployed. Salaried employees remained as the biggest group in all phases of the follow-up study. Unemployed were the other large group at the beginning of the training, but many of them managed to make a career shift[17]. As a result, the amount of unemployed decreased considerably subsequent the training.

One of the goals of the study was to find out the career choices the respondents made following completion of the program. The phases of the follow-up study and the career paths of the respondents are illustrated in Figure 1 (see Appendix 1). In the Figure 1, the boxes on the left depict the statuses of the trainees upon entry into the program. The entry statuses were inquired in both phases of the follow-up study. Moreover, the organizing parties provided background information on the trainees at the beginning of the study. The boxes in the middle describe the professional statuses of the respondents in the first phase and the boxes on the right in the second phase of the follow-up study. The fine arrows present respondents' career paths when a career shift took place. The wider arrows portray change – respondents made a career choice and so, shifted from one professional status group to another.

[17] Relationship between unemployment and new firm formation is a controversial issue that has received academic attention, see e.g. Bannock and Stanworth (1990); Tervo and Niittykangas (1994); Orser and Hogarth-Scott (1998). In broad terms, time-series studies tend to show that entrepreneurship could be induced by high unemployment while cross-sectional studies have indicated the reverse.

4.4 Measures of Impact

Following, an attempt to categorize the questions asked in phone-interviews and the items applied in assessing the effectiveness of the training program according to the measures provided in earlier studies is presented. Consequently, Table 1 portrays the main items used in the current study to assess the impact of the franchisee training program.

According to Storey's (2000) view on impact evaluation all measures applied in this study were monitoring, since no control group was used. In the data analyses descriptives, binominal tests, U-tests, T-tests, one-way ANOVA and Logistic Regression Analysis (LRA) were utilized.

Table 1. Measures of impact applied in the present study

Type of impact assessment measures	Questions and items applied in the study	Type of scales
Vaherva (1983), Mikkonen (1997): - reaction - learning - behavior - ultimate outcome	Reaction 1) overall satisfaction towards the training 2) intention to participate today based on prior experience 3) intention to recommend the program to others 4) intention to buy a franchise or intention to set up or acquire a stand-alone business in future (applied only to the others-group)	1) a five point Likert-type scale 2) dichotomized, nominal scale 3) dichotomized, nominal scale 4) dichotomized, nominal scale
	(Learning) – knowledge, skills, and attitudes obtained and the relations created by the trainees)	not applicable (were inquired in the first phase of the follow-up study)
	Behaviour 1) effect of the program to the career choice made afterwards 2) satisfaction towards the career choice made 3) belief that would have made the same career choice without taking the training 4) effect of what was learned in the training on one's career	1) a five point Likert-type scale 2) a five point Likert-type scale 3) dichotomized, nominal scale 4) metric scale
	Ultimate outcome Questions concerning the firms established and bought by the respondents and the impact of the businesses on the society and economy. Some questions were open-ended, some had structured options for answer	open-ended questions concerning e.g. annual turnover, number of employed staff – metric scale was used

Table 1. (continued)

Type of impact assessment measures	Questions and items applied in the study	Type of scales
McMullan, Chrisman and Vesper (2001): – subjective measures – attribution measures – objective measures	Subjective measures 1) overall satisfaction towards the training 2) intention to participate today based on prior experience 3) intention to recommend the program to others 4) intention to buy a franchise or intention to set up or acquire a stand-alone business in future (applied only to the others-group)	1) a five point Likert-type scale 2) dichotomized, nominal scale 3) dichotomized, nominal scale 4) dichotomized, nominal scale
	Attribution measures 1) effect of the program to the career choice made afterwards 2) satisfaction towards the career choice made 3) belief that would have made the same career choice without taking the training 4) effect of what was learned in the training on one's career	1) a five point Likert-type scale 2) a five point Likert-type scale 3) dichotomized, nominal scale 4) metric scale
	Objective measures Questions concerning the firms established and bought by the respondents. Some questions were open-ended; some had structured options for answer. No measures were applied to the others-group.	open-ended questions concerning e.g. annual turnover, number of employed staff - metric scale was used

5 Results

5.1 Sample and Sub-Group Descriptions

The current study concentrated on those respondents who chose an entrepreneurial career either as a franchisee or as a stand-alone business owner. Hence, the research data were categorized according to the professional statuses of the respondents at the time of the interview. The total sample (n=143) was divided into three subgroups of franchisees (n=24), stand-alone small business owners (n=22) and others (n=97). The others-group consisted of those respondents who had not established or bought a stand-alone firm or started a franchised business after completion of the training. Following, the results of the data analyses for the three subgroups as well as for the total sample are presented.

No statistically significant differences were found among the analyzed subgroups regarding gender, age, marital status, education levels or the length of the trainees' prior work experience. See Table 2 for more detailed description of the sample and

Table 2. Description of the sample and sub-groups

		Franchisees (n=24) %	Small Business Owners (n=22) %	Others (n=97) %	Total (n=143) %
Gender	Male	50	64	44	48
	Female	50	36	56	52
Age	younger than 35	8	9	19	16
	35 – 44 years	42	32	28	31
	45 – 54 years	33	45	39	39
	55 – 64 years	17	9	13	13
	65 or older	0	5	1	1
	Min. - Max.	28 - 57	24 - 67	26 - 68	24 - 68
	Md. (Mean)	44.5 (45.5)	45 (44.82)	45 (44.05)	45 (44.42)
Marital status	Married	62	59	54	56
	Long term relationship	17	14	15	15
	Single	4	4	20	15
	Divorced or widowed	17	18	11	14
Highest level of education completed prior to training program	Vocational training	25	47	39	38
	Vocational college	40	32	33	34
	Polytechnic	15	0	8	8
	University	20	21	14	20
Length of work experience prior to training program	Less than 10 years	4	27	23	20
	10 – 14	25	0	15	15
	15 – 19	25	23	17	19
	20 – 24	21	27	23	11
	25 – 29	4	5	12	10
	30 years or more	21	18	10	25
	Min. - Max.	4 - 35	1 - 42	2 - 41	1 - 42
	Md. (Mean)	16.5 (18.92)	19 (18.30)	16.5 (16.77)	18 (17.39)
Job status upon entry into the training program	Unemployed	29	32	43	39
	Employed in				
	… private sector	46	41	39	40
	… public sector	8	5	6	7
	Self-employed	4	14	4	6
	Student	13	0	6	6
	Retired	0	4	1	1
	Other	0	4	1	1
Experience as a self-employed prior to the training program	Yes	29	55	24	30
	No	71	45	76	70
Entrepreneurial background prior to training program	Yes	63	68	63	64
	No	37	32	37	36
Work experience from micro-size company prior to training program	Yes	67	68	42	50
	No	33	32	58	50

Note: all the sums may not add to 100 due to rounding.

subgroups. Nevertheless, some interesting marks regarding the trainees' personal characteristics mentioned above are pointed out in the following. The stand-alone small business owners-group was the most male dominated as nearly two of three (64%) were men (see Table 2). This corresponds to the distribution of sexes in Finnish entrepreneurs' population (Hyrsky and Lipponen 2004). To compare, there was an exactly equal number of females and males in the franchisees-group. The observation implies that franchising creates equal entrepreneurial career opportunities for both sexes (cf. Dant, Brush and Iniesta 1996; Tuunanen 2002).

Trainees' job statuses upon entry into training program varied a lot (cf. Figure 1, Appendix 1). The two biggest respondent groups were salaried employees (47%) and unemployed (39%). Over half (55%) of the respondents in the stand-alone small business owners-group had prior self-employment experience. The figure was significantly bigger that what was seen in the other two sub-groups. In addition, franchisees and stand-alone small business owners had significantly more frequently work experience from micro-sized companies than others. However, when exploring trainees' entrepreneurial backgrounds it turned out that the sub-groups did not differ in this regard. The expression entrepreneurial background here means close (a life companion, parent/-s, a close relative) entrepreneurial role model who operates as a small business owner, and/or work experience from family business.

In the others-group prior unemployment seemed to appear more frequently than in the two entrepreneurial groups as illustrated in Table 2. This may hint to difficulties that unemployed persons might have faced in pursuing entrepreneurial career options. Statistically unemployment seemed not to be the most fertile ground for self-employment since the majority of the franchisees and stand-alone small business owners did not have unemployment background. The question is whether franchisee training program as an entrepreneurship education alleviated problems that hindered unemployed persons' self-employment? And if so, how did the program help them and to what extent?

5.2 Effectiveness of the Franchisee Training Program

Overall satisfaction towards the training program. A five point Likert-type scale was used to measure trainees' total satisfaction towards the training program. The satisfaction score for the total trainees' population was 3.31 (see Table 3). Among the investigated three sub-groups the highest scores were given by the stand-alone small business owners-group (3.55) and the lowest ones by the others-group (3.24). Franchisees-group was in the middle with the score of 3.38. However, the differences showed to be statistically insignificant (at level .207).

Satisfaction - intention to recommend the training program to others and intention to do it again. The trainees' overall post-program satisfaction was additionally measured through two dichotomous nominal scales, which pertained into their intentions. The first scale concerned trainees' inclination to recommend the training program to other potential participants. An overwhelming majority, 94% of all respondents were prone to recommend the training. Likewise, results regarding the

three sub-groups were also quite promising. In every group the respective percentage was more than 90%. The franchisees-group was the most likely to recommend the training while around 96% of them indicated a positive intention. Interestingly, the stand-alone small business owners were slightly less likely to recommend the program than the respondents in the others-group as the respective figures were 91% and 95%. In spite of that, the differences between the percentages were relatively small and thus statistically insignificant as illustrated in Table 3. The second nominal scale measured trainees' post-course proclivity to make the same decision again i.e. to take part in the program now if given a chance. In total, three out of four trainees (75%) responded positively when asked whether they would take the program again. When comparing the studied three sub-groups, franchisees-group was distinctive. More than nine of ten (92%) were ready to take the program again while in two other groups the respective percentages were significantly lower, 77% for stand-alone small business owners and 71% for the others.

For the others-group (n=97) effectiveness of the training was additionally measured via their entrepreneurial intentions (see Table 3). A quarter of respondents (25%) indicated an intention to set up a stand-alone business in the future. Meanwhile every seventh (14%) expressed a future interest on buying a franchise. Nevertheless, the biggest group of respondents was those who were unsure of their intentions regarding inquired two entrepreneurial career options.

Satisfaction towards the career choice made. A five point Likert-type scale ranging from 1, very dissatisfied, to 5, very satisfied, was developed to measure trainees' satisfaction towards the career choice they made after completing the training. The total mean score of the measure was 3.59 indicating a fairly good level of satisfaction (see Table 3). Seventy percent of all respondents were satisfied or very satisfied with their career decision whereas some 22% were dissatisfied or very dissatisfied. When comparing the three sub-groups it emerged rather surprisingly, that the most satisfied group was stand-alone small business owners who scored 4.09 on the scale. Franchisees' respective score was 3.88 and the lowest mean 3.41 was scored by the group of other participants. One-way ANOVA analysis revealed the scores being statistically significantly different at level .018.

Effect of the training program on the trainees' career choice. A five point scale ranging from insignificant, corresponding the value 1, to very strong, corresponding the value 5, was used to chart the strength of the effect of the training program on the trainees' career decision made after completion of the program. The total mean score of the measure was as low as 2.21 indicating well under median effect of the training. More detailed, roughly half of the respondents (47%) told that the program had an insignificant effect on their post-training career choices whereas every fifth (21%) described the effect strong or even very strong. The examined three sub-groups were very distinct from each other in this respect (see Table 3). The highest mean score was achieved in the franchisees-group, 3.46. Half of them (50%) expressed that the training had strong or very strong effect on their career decision. Almost an equal share in the stand-alone small business owners-group (45%) indicated the same. However, the mean score 2.95 was statistically signifi-

cantly lower (at level .000) than in the franchisees-group. This was accounted by a considerable share (23%) of those stand-alone small business owners who described the effect being insignificant. Respectively, the corresponding percentage among franchisees was nearly three times less, just eight percent. The others-group scored the lowest mean value 1.72. In that group more than 63% rated the effect of the training being insignificant.

A further question, with two given answer options, yes or no, on the effects of the program was used to shed light on multi-dimensional outcomes of the program. The aim was to capture trainees' genuine opinion on the program's effect on their current career position (see Table 3). In total, some 85% of all participants believed that they would be in their present career position without completing the training. Despite this, significant differences were discovered between the three sub-groups. The franchisees-group was clearly distinguished in this regard as more than a half of them (54%) viewed that they would *not* be franchise owners without the program they took. The respective percentages were 14% for stand-alone small business owners-group and only 6% for the others-group. These results highlight the strong effect of the training focused on the franchising issues.

Although very sharp distinctions were found between the opinions of the three groups, none of the respondents stated that the training would have disadvantaged their career. Yet, only little less than every fourth (23%) believed that it advantaged their career as shown in Table 3. Rather surprisingly, the stand-alone small business owners-group perceived that the knowledge, skills and attitudes obtained and relations created during the training had advanced their career the most of the examined three groups. Approximately 45% of the stand-alone small business owners and one third of the franchisees (33%) believed the training promoted their career. The respective amount was merely 16% among the others-group. The results are particularly interesting regarding stand-alone small business owners. It turned out that they were able to utilize the contents of the program in relation to their own entrepreneurial plans although the curriculum was quite limited to franchising issues.

Analyzing the effect of the training program on becoming a franchisee. A logistic regression analysis was performed to find out whether the measures used to gauge the effectiveness of the training program could be used to predict becoming a franchisee (see Table 4). The stand-alone small business owners -group (n=22) was isolated from the analysis. The model appeared to have decent properties and strong explanatory power. Out of all the observations 91.5% was classified correctly by the LRA model. Importantly, the model had fairly good predicting power concerning those who actually started a franchised business. Particularly three items stood out. The effect of the training program on the career choice decision and the intention to take the training program again were statistically significant predictors in the model. In addition, respondents' belief that they would not be in the same career position at the time of the interview without completing the training program, seemed to be a proper variable to predict a franchise start-up. The results of the analysis indicated that the program had a clear impact and contribution on becoming a franchisee.

Table 3. Effectiveness of the training program

		Franchisees (n=24) %	Small Business Owners (n=22) %	Others (n=97) %	Total (n=143) %
Overall satisfaction					
How did the training meet your initial expectations?	Surpassed considerably	8	14	5	7
	Surpassed slightly	25	36	25	27
	Met my expectations	63	41	61	58
	Fell short slightly	4	9	7	7
	Fell short considerably	0	0	2	1
	Mean	3.38	3.55	3.24	3.31
Intentions					
Intention to recommend the training program	Yes	96	91	95	94
	No	4	9	5	6
Would take the training program again	Yes	92	77	71	75
	No	8	23	29	25
Intention to set up or buy a stand-alone business in the future	Yes	NA	NA	25	25
	No			14	14
	Cannot say			61	61
Intention to buy a franchise In the future	Yes	NA	NA	14	14
	No			38	38
	Cannot say			48	48
Satisfaction towards the career choice decision made after training program	Very satisfied	25	41	11	18
	Satisfied	54	41	54	52
	Cannot say	8	4	9	8
	Dissatisfied	8	14	17	15
	Very dissatisfied	4	0	9	7
	Mean	3.88	4.09	3.41	3.59
How would you describe the effect of the training program on the career choice decision you made after the training program?	Very strong	21	4	0	4
	Strong	29	41	8	17
	Intermediate	33	23	18	22
	Slight	8	9	11	10
	Insignificant	8	23	63	47
	Mean	3.46	2.95	1.72	2.21
Do you believe that you would be in your current career position without completing the training program?	Yes	46	86	94	85
	No	54	14	6	15
What kind of effect the knowledge, skills and attitudes obtained and relations created during the training program have had on your career?	Advanced my career	33	45	16	23
	No effect	42	50	74	65
	Disadvanced my career	0	0	0	0
	Cannot say	25	5	10	12

Note: all the sums may not add to 100 due to rounding.

Analyzing the effect of the training program on becoming a franchisee. A logistic regression analysis was performed to find out whether the measures used to gauge the effectiveness of the training program could be used to predict becoming a franchisee (see Table 4). The stand-alone small business owners -group (n=22) was isolated from the analysis. The model appeared to have decent properties and strong explanatory power. Out of all the observations 91.5% was classified correctly by the LRA model. Importantly, the model had fairly good predicting power concerning those who actually started a franchised business. Particularly three items stood out. The effect of the training program on the career choice decision and the intention to take the training program again were statistically significant predictors in the model. In addition, respondents' belief that they would not be in the same career position at the time of the interview without completing the training program, seemed to be a proper variable to predict a franchise start-up. The results of the analysis indicated that the program had a clear impact and contribution on becoming a franchisee.

A similar logistic regression analysis was carried out for the stand-alone small business owners –group and this time the franchisees (n=24) were left out from the analysis. The same variables were used in the analysis as previously with the franchisees group. As expected, the explanatory power of the LRA model was weaker as 86.2% of all observations were classified correctly (40.9% of the stand-alone small

Table 4. Logistic regression analysis for predicting of becoming a franchisee

Variables	Coefficient	S.E.	Sig.
Overall satisfaction towards the program:			
Expectations	-.191	.584	.743
Intentions:			
Recommendation	-1.790	1.937	.356
Participation	3.007	1.451	.038
Satisfaction towards the career choice	.462	.320	.149
Effect of the training program on career choice:			
Effect	1.169	.325	.000
Belief	-1.566	.745	.035
Knowledge, skills, attitudes	.714	.813	.380
Constant	-5.238	2.570	.042
Nakelkerke R Square .574			
Hosmer and Lemeshow Test .808			

Observed	Predicted		Percentage Correct
	Franchisees	Others	
Franchisees (n=24)	17	7	70.8
Others (n=94)	3	91	96.8
Overall Percentage			91.5

business owners and 96.8% of the others–group). In addition, the predicting power of the model was weaker. Only one item, the effect of the training program on the career choice decision was statistically significant (Sig. .001) in predicting becoming a stand-alone small business owner. The LRA model was tested once more with the total group of entrepreneurs i.e. the franchisees and stand-alone small business owners (n=46). This time, the model was able to classify correctly 82.1% of all observations (65.2% of the entrepreneurs and 90.4% of the others –group). Furthermore, the effect of the training program on the career choice decision was the only statistically significant ($p < .001$) item in predicting becoming an entrepreneur. However, the Nagelkerke R Square value was higher for the total group of entrepreneurs as it was for stand-alone small business owners, values being 35.3% and 46.6% respectively. The results strengthen the conclusion that the program had an impact and contribution on becoming a franchisee.

5.3 Outcomes Resulting from the Stand-Alone Businesses Started or Acquired and Franchised Ventures Founded

Of the 143 respondents of the current follow-up study, 24 established a franchised business and 22 established or bought a stand-alone business subsequent to the training. As part of the interview, the franchisees and stand-alone small business owners were inquired about their firms. The purpose was to examine some of the key figures relating to those companies and to analyze the potential differences between the two business formats. Table 5 illustrates the following results.

In total the 46 franchised and stand-alone firms reached an annual turnover of 14.5 million euros in 2003. Nevertheless, the size difference between the franchised and non-franchised companies appeared to be dramatic regarding annual turnover. On the average, franchised companies made approximately seven and half times greater revenue than the stand-alone businesses. Franchised companies' average annual turnover was 668,000 euros, whereas the stand-alone businesses generated an average turnover of 89,400 euros. The difference was statistically significant (at level .000).

Together the stand-alone and franchised firms employed 151 salaried employees. However, a statistically significant difference was found regarding the average number of the employees between the stand-alone and franchised firms. Franchised companies were nearly five times greater in size compared to stand-alone firms when measuring the number of staff. While franchised companies had on average 5.57 jobs, the respective number in the stand-alone businesses was only 1.15. In detail, 85% of the stand-alone businesses employed less than three persons while the corresponding percentage in the franchised firms was 44. Thus, more than half of the franchised companies employed three or more employees.

Both the franchisees and stand-alone small business owners viewed the profitability of their companies in a quite similar way. Some 70% of the franchisees

perceived their companies presently profitable, while the respective figure was a bit higher among stand-alone small business owners, 75%. Moreover, no considerable distinctions concerning the future visions of the stand-alone and franchised businesses were recorded. Roughly equal amount of respondents, two out of three in both explored groups estimated that the turnover of their companies will grow in the future. Similarly, majority of the stand-alone small business owners and franchisees, more than 80%, predicted that the size of the staff in their firms will stay the same.

Table 5. Businesses of the respondents

		Franchisees (n=24) %	Small Business Owners (n=22) %
Legal form of the firm	Proprietorship Partnership Limited company	26 13 61	65 0 35
Turnover of the firm (in thousands euros)	Min. – Max. Md (Mean) Sum	50 – 2,500 435 (668) 13,353	0 – 250 50 (89.4) 1,162
Number of employees of the firm	None 1 2 3 - 10 More than 10 Min. – Max. Md (Mean) Sum	9 9 26 48 8 0 – 27 4 (5.57) 128	25 50 10 15 0 0 – 3 1 (1.15) 23
<u>Present perception of the business</u> I consider my business profitable	Yes No Cannot say	70 26 4	75 15 10
<u>Future visions of the business</u> In the future, turnover of my firm…	will grow. will stay the same. will decline.	64 36 0	65 30 5
In the future, the number of employees in my firm…	will grow. will stay the same. will decline.	18 82 0	15 85 0

Note: all the sums may not add to 100 due to rounding.

6 Discussion and Implications

The results of the current study measuring the effectiveness of the franchisee training program were rather promising especially regarding the respondents who made the decision to become franchisees or entrepreneurs. The training program had an impact on the respondents' career decisions. Over a half (54%) of the franchisees indicated that they would not be franchisees if they had not taken the training. The expression was strongly supported by the logistic regression analysis where several impact measures were utilized in predicting potential start-up of a franchised business. The training seemed to be useful and valuable also to those respondents who established or bought a stand-alone business. However, it is important to note that as such the training program hardly produced any franchisees or stand-alone small business owners. Rather, it was part of a wider decision-making process with many other influencing background, personal and environmental factors. Nevertheless, the LRA displayed that the background factors did not have a major role on the decision-making process of those trainees who became franchisees or entrepreneurs. This may emphasize the impact of the training program on the decision-making process even more.

The effects of education and training might be seen after diverse periods of time and appear in various ways for different people or parties. Therefore, when examining effectiveness of entrepreneurship education and training, 'following up' and observing those educated in a long term is important. In addition, different points of view should be considered. The findings of the follow-up study correspond to the findings of McMullan et al. (2001) who showed a correlation of attribution measures with objective measures.

The present follow-up study was conducted by the university, and thus, the organizers were not involved in the assessment. In order to make the analysis more reliable, several complementary measures were applied. What further enhanced the reliability is that the response rate remained relatively high in both phases of the follow-up study. To improve the validity of the measures used, an extensive literature review was carried out. Moreover, both quantitative and qualitative measures were applied. However, to be able to assess the impact of the franchisee training program more comprehensively, applying qualitative methods might be appropriate. In that way the various factors relating to the process of becoming an entrepreneur and the actual role of the training program, if any, could be examined. It may be difficult to capture the various effects of education and training with quantitative measures, but utilizing qualitative methods might help to conquer the problems.

The franchisee training program is a useful scheme and well worth continuing already because of its unique nature and contribution for the Finnish franchising sector. The program has served as a franchising information channel in Finland, where franchising is still rather poorly known and understood method of business. In addition, it has been a get-together venue for franchisors and potential franchisees in a market that lacks franchise fairs and expositions. The program provided

the basics of franchising and small business ownership to the trainees and in that way assisted franchisors and allowed them to concentrate on system specific training with those who bought a franchise. Furthermore, the program has many significant indirect effects such as the franchise and stand-alone businesses established or bought as well as the revenue and jobs created by those companies. What is more, one of the trainees who set up a franchise business is a master franchisee with nearly twenty additional franchised outlets.

Despite the many positive outcomes of the program, measuring its effectiveness is problematic. This is partly due to a lack of clearly set objectives. Therefore, a redesign of the program might enhance its status and be beneficial for all the parties involved directly and indirectly. Setting understandable, feasible and measurable objectives would be a good starting point. It should also be considered, whether the program could better target the knowledge and skills needs of an entrepreneur and/or a franchisee in today's uncertain and complex environment (Gibb 2002). Furthermore, motivational training might be a valuable additional aspect to the program to help the trainees to success (McClelland 1961; Timmons 1971; Miron and McClelland 1979).

Selection of the trainees could also be done more carefully. Their intentions, background and personal factors should be tested to confirm that favourable ingredients for becoming franchise owners exist. This might reduce the amount of trainees to some extent and thus, the training should be extended outside the three large cities. The programs should be started also elsewhere in Finland to increase the number of graduates and to balance the regional development. Especially areas with no large employer/s and a high density of entrepreneurial activity might provide a fruitful soil for extensions of the program (Stanworth et al. 1989; Tervo and Niittykangas 1994). To conclude, the franchisee training program has been an applicable government financed small business policy activity and should be continued. It has served to satisfy the strong need for new franchisees and benefited the Finnish franchise sector as well as indirectly the economy through the established and continued businesses. With minor alterations its role and impact could be further increased.

7 Propositions for Future Studies

The study on the impacts of the franchisee training program is valuable and well worth continuing. The follow-up study could be carried on in three ways: those respondents who intended to become franchisees or entrepreneurs in future could be contacted to see whether they have been able to implement those intentions. Secondly, those respondents who were franchisees or entrepreneurs at the time of this study could be examined to find out the potential impact of the franchisee training program on the survival and success of those businesses. Thirdly, some interesting examples among those franchisees and entrepreneurs could be chosen for case-studies. The purpose of the case-studies would be to deepen the understanding on

the process of becoming a franchisee or an entrepreneur (the motives) and whether the franchisee training program had an impact on the decision-making process and if so, what kind of impact.

Franchisors were not the focus of the current study and therefore it did not provide information on their opinions on the program and the trainees who completed the training. However, investigating the franchisors' point of view might provide very useful information for developing the program and help to gauge its effectiveness. Furthermore, no control group was employed which is a limitation of this study. The franchisee training program was an entrepreneurship education program and the participants were interested in making a career change. The program aimed at providing them information on one career option, being a franchisee. To overcome the lack of information from a control group at least to some extent, the results of the franchisee training program could be compared to the results of for instance, other government financed entrepreneurship education programs.

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Appendix

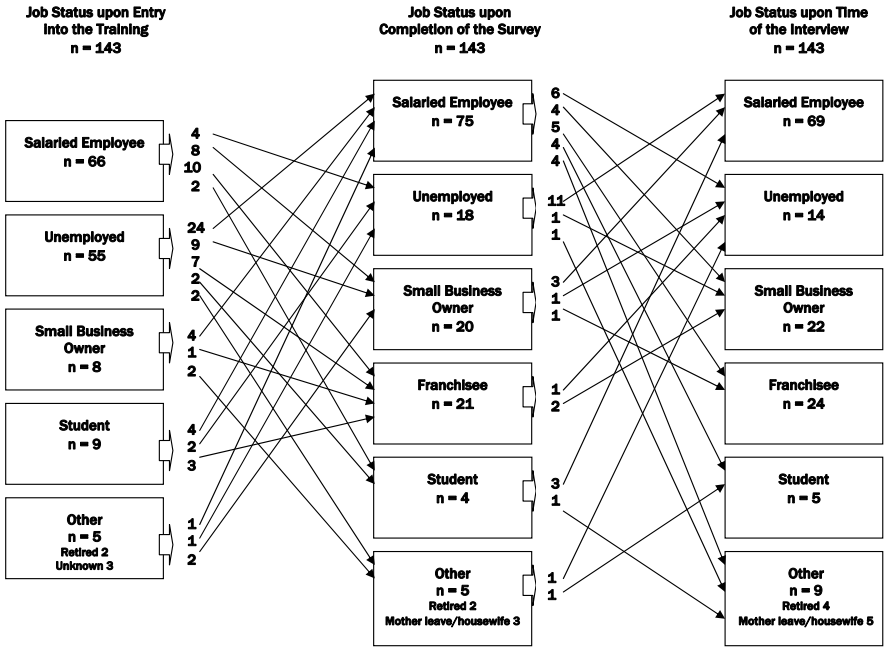

Job Status upon Entry into the Training n = 143
Job Status upon Completion of the Survey n = 143
Job Status upon Time of the Interview n = 143
Salaried Employee n = 66
Unemployed n = 55
Small Business Owner n = 8
Student n = 9
Other n = 5 Retired 2 Unknown 3
Salaried Employee n = 75
Unemployed n = 18
Small Business Owner n = 20
Franchisee n = 21
Student n = 4
Other n = 5 Retired 2 Mother leave/housewife 3
Salaried Employee n = 69
Unemployed n = 14
Small Business Owner n = 22
Franchisee n = 24
Student n = 5
Other n = 9 Retired 4 Mother leave/housewife 5
4 8 10 2
24 9 7 2 2
4 1 2
4 2 3
1 1 2
6 4 5 4 4
11 1 1
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1 1

Fig. 1. Respondents' Career Shifts

Understanding Strategic Interactions in Franchise Relationships

Evelien Croonen[1]

Abstract. This paper aims to grasp the complexity of how and why franchise partners as strategic alliance partners interact with each other given March's exploration/exploitation trade-off (March 1991). A research model is presented that distinguishes five types of responses that partners may adopt in their relationships. The empirical part consists of a case study which focuses on two 'strategic change trajectories' (SCTs) in a franchise system in the Dutch drugstore industry. During these SCTs the franchisor tried to implement strategic changes in the franchise system. This paper discusses what responses franchisees adopted in a reaction to the introduction of these SCTs by the franchisor, what responses the franchisor adopted toward these franchisees in turn, and why both partners adopted these responses. The paper concludes with adding a new response type to the current response typology, with providing insight in why franchise partners adopt certain responses, and with discussing the implications of this study.

Keywords. Franchising, strategy, interactions, drugstore industry

1 Introduction

This paper considers franchise relationships as a specific form of strategic alliance. In recent years, researchers have slowly started to recognize that different strategic alliance forms have different capabilities and limitations. According to Osborn and Hagedoorn (1997), this differentiation among forms is also accompanied by a broader view on alliance functions and motivations. Koza and Lewin (1998) divide the different motivations that alliance partners may have into two categories: a motivation to *exploit* existing resources ('exploitation alliance') and a motivation to *explore* new opportunities ('exploration alliance'). This distinction of exploration and exploitation is based on March (1991). *Exploration* includes issues such as search, variation, risk-taking, experimentation, play, discovery, and innovation.

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Exploitation includes aspects such as refinement, choice, production, efficiency, selection, implementation, and execution. March argues that firms should try to find a proper balance between exploration and exploitation in order to survive and prosper in their environments both in the short and the long run. Organizations that engage in exploration resulting in the exclusion of exploitation may find that they suffer the costs of experimenting without gaining a great deal of its benefits. On the other hand, organizations that engage in too much exploitation might become inert and unable to adapt to their environments in the long run.

This paper focuses on how franchisors and franchisees interact with each other given the abovementioned trade-off. A great deal of franchising literature views franchise relationships from narrowly defined perspectives and merely considers 'exploitative' aspects of franchising, such as fee calculation or efficient governance structures (Stanworth et al. 1996; Sorenson and Sørensen 2001; Clarkin and Rosa 2005). Winter and Szulanski (2001) discuss the exploration/exploitation trade-off in connection with situations in which a large number of similar units deliver a product or perform a service. In this context, they refer to operating a large number of similar units as a 'replication strategy', of which franchising is an example. In franchising, the franchisor is the replicator who replicates a business format through franchisees and sometimes also through company-owned units. According to Winter and Szulanski (2001), a replication strategy is often conceptualized as little more than the exploitation of a business format. However, there are three complicating factors in replication strategies in general and franchising in specific.

First, an important challenge for replicators is the question how to replicate the business format in different local circumstances. In the franchising literature this is often referred to as the tension between standardization of the business format across all units versus local adaptation (cf. Bradach 1998; Kaufmann and Eroglu 1998). By standardizing the business format, the franchisor maintains the shared identity of the franchise system and is able to benefit from scale and scope advantages (exploitation). On the other hand, individual units may face different competitive circumstances that necessitate the adaptation (exploration) of the business format.

The second complicating factor in replication strategies is that a business format is not a timeless concept. According to Winter and Szulanski (2001) a replication strategy should be considered as a process that involves a phase of *exploration* in which a business format is developed and refined followed by a phase of *exploitation* in which the business format is stabilized and leveraged through large-scale replication. This phase is then followed by yet another phase of exploration and exploitation and so on. Bradach (1998) also points at this tension: sometimes the business format needs to be adapted to the system as a whole in order to discern new threats and opportunities.

The third complicating factor is not explicitly distinguished by Winter and Szulanski (2001) because it only applies to franchising as a specific kind of replication strategy. Franchising involves *independent* business owners, which is completely different from replication by company-owned units. The literature often considers franchise relationships as static relationships with franchisees as passive and non-

intelligent partners, which is too simplistic (Elango and Fried 1997; Clarkin and Rosa 2005). Moreover, Tuunanen and Hyrsky (2001) point out that past research has paid very little attention to ambiguity and contradictions in franchise relationships. Therefore, this paper considers franchisors and franchisees as strategic alliance partners that aim to create mutual advantage through cooperation but at the same time they have to deal with the risk of dependence in their relationship.

In sum, the *main objective* of this paper is to grasp the complexity of *how* franchise partners as strategic alliance partners respond to each other given the exploration-exploitation trade-off and *why* they adopt these responses. This paper is part of a larger study[2], consisting of the following four phases:

- *Phase 1: development of an initial research model*. The first phase started with the development of a model for understanding responses of alliance partners in general. This was based on a review of strategic alliance literature. This general model formed the basis for a specific research model to gain insight into the responses of franchise partners as specific type of alliance partners. This model was based on a review of scientific franchising literature, specialist magazines and exploratory interviews with franchisors and franchisees from several Dutch franchise systems in various industries. Within each system, one manager or the CEO from the franchisor's organization and at least one franchisee who had some knowledge about important developments in the system from the perspective of the franchisees were interviewed. For both franchisors and franchisees topic lists were used, including topics such as reasons for franchising/becoming a franchisee and conflicts in the franchise relationship.
- *Phase 2: development of a detailed case study design and elaboration of the research model*. At the end of Phase 1 the Dutch drugstore industry was selected as the empirical setting for the remainder of the study. Phase 2 consisted of exploratory interviews with all franchisors and several franchisees from the franchise systems in this industry. The aim of this step was to elaborate on the research model and to develop a detailed case study design for the case studies in Phases 3 and 4. Phases 1 and 2 are referred to as the *preliminary study*.
- *Phase 3: execution of case studies in four Dutch drugstore systems, and Phase 4: analysis and conclusion drawing*. Phases 3 and 4 were highly interrelated and the boundaries between them were not so clear as for the other phases. Case studies were conducted in four franchise systems in the Dutch drugstore industry. However, this paper focuses on only one of them, namely the DA system. Section 3 will discuss the methodological choices for these phases.

[2] Croonen (2006) discusses the larger study in detail (i.e. theoretical backgrounds, the research model, methodology, the case studies and their analyses, the conclusions and discussion).

The structure of the paper is as follows. First, section 2 discusses the research model. Section 3 deals with the methodological choices concerning the case studies in Phase 3. Section 4 introduces the DA system and discusses which responses both franchise partners adopted toward each other and why. Section 5 deals with the conclusions and a discussion.

2 The Research Model

Fig. 1 presents the research model for franchise relationships from the franchisee's perspective. The model can be reversed to the franchisor's perspective. This is not presented here because it is the same model but only the FRE's and FRO's are changed.

The model in itself is not dynamic; it represents a 'snapshot' of the relationship from one partner's perception of the independent variables and his response at a certain point in time. In the case studies, several 'snapshots' were made on the basis

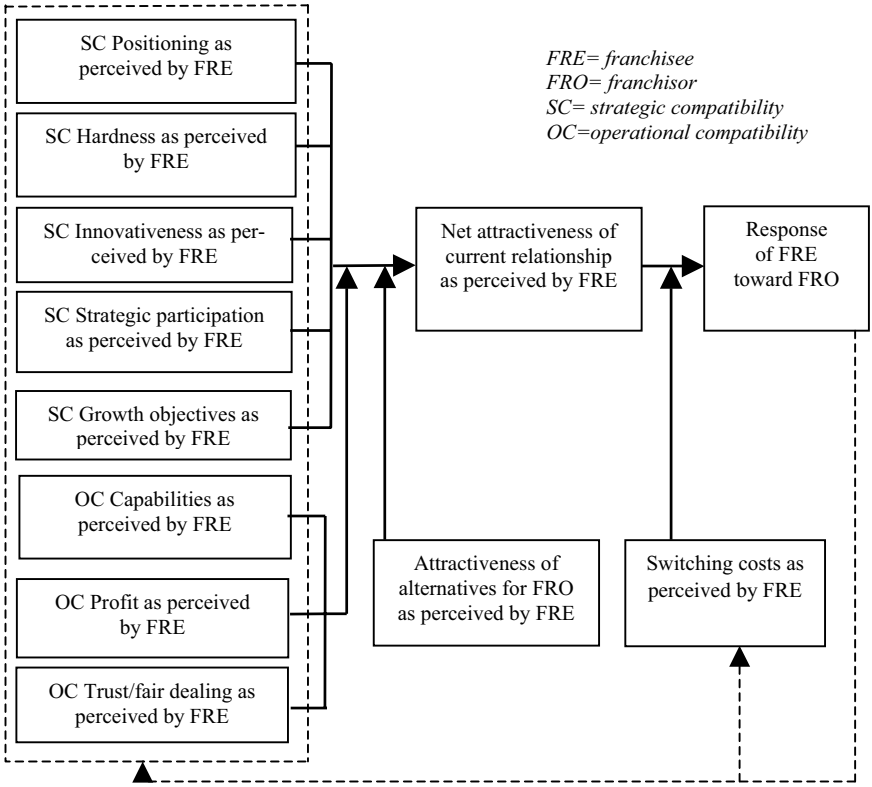

SC Positioning as perceived by FRE
SC Hardness as perceived by FRE
SC Innovativeness as perceived by FRE
SC Strategic participation as perceived by FRE
SC Growth objectives as perceived by FRE
OC Capabilities as perceived by FRE
OC Profit as perceived by FRE
OC Trust/fair dealing as perceived by FRE
FRE= franchisee
FRO= franchisor
SC= strategic compatibility
OC=operational compatibility
Net attractiveness of current relationship as perceived by FRE
Response of FRE toward FRO
Attractiveness of alternatives for FRO as perceived by FRE
Switching costs as perceived by FRE

Fig. 1. Understanding the response of FRE toward FRO at a certain point in time

of this model to create a more dynamic picture of the franchise relationship over time. The details of this approach are discussed in section 3.

The model distinguishes five so-called 'franchise system characteristics' on which franchisors have to make strategic decisions in managing the exploration/exploitation trade-off in their franchise systems. These five franchise system characteristics are proposed to influence both franchise partners' perceptions of *strategic compatibility (SC)*. 'Strategic compatibility' refers to the strategic value that partners ascribe to their alliance (Niederkofler 1991; Medcof 1997). The franchise system characteristics are partly based on Bradach's trade-off of control and innovation in franchise systems (Bradach 1998). He argues that franchisors face four primary challenges: 1) maintaining uniformity across all units of the system, 2) allowing local responsiveness, 3) making system wide adaptations, and 4) adding units to the system. Bradach's challenges have served as a starting point for developing the five franchise system characteristics; however, some small adaptations have been made to these challenges. Moreover, based on the findings of the preliminary study, two other system characteristics have been added: the positioning of the system and the organization of franchisee strategic participation. This has resulted in the following franchise system characteristics:

- Positioning. This refers to the way the system is positioned in the market; is the business format a high-price, high-added value format or does it have a low positioning with relatively lower quality and prices? This relates to Porter's competitive strategies; overall cost leadership, differentiation and focus (Porter, 1980). Cost leadership means that firms compete at low costs. This requires cost control and economies of scale. The differentiation strategy refers to differentiating a firm's products and/or services to create something that is unique in the industry. The positioning of a system can vary from very low to very high in the market.
- Hardness. In general, the trade-off between maintaining uniformity versus local adaptation is well-known in the franchising literature (cf. Kaufmann and Eroglu 1998; Dant and Gundlach 1998). This is related to Bradach's challenges of maintaining uniformity and local adaptation. However, Bradach's challenges are two sides of the same coin, and therefore they are combined to form a single franchise system characteristic. In this paper, hardness refers to the tension between standardization (exploitation) and local adaptation by franchisees (exploration). In a 'hard' system virtually every aspect of a unit's operations is formulated in operating manuals and procedures that the franchisee is obliged to follow. In a 'soft system' there are fewer rules and procedures and franchisees therefore have more room. A system's hardness can vary from very soft to very hard.
- Innovativeness. This is related to Bradach's system wide adaptation (Bradach 1998). As pointed out, a business format is not a timeless concept and sometimes adaptations need to be made for the system as a whole. Innova-

tiveness refers to how quickly adaptations are made to the business format. Bradach only focuses on product innovations, while according to this paper adaptations can take place on three levels: adding new products or services to the business format, adding new product groups and/or service groups, and adapting the business format as a whole. A system's innovativeness can vary from very low to very high.

- The organization of franchisee strategic participation. This characteristic was included on the basis of the preliminary study. This refers to the degree to which franchisee involvement in strategic decision making for the franchise system is organized. This mainly concerns the presence of a Franchise Advisory Council (FAC), its rights and the degree to which procedures concerning the FAC are formulated. This characteristic can also vary from very low to very high.
- Growth objectives. This characteristic was also included based on the preliminary study and it is related to Bradach's challenge of adding units. In this paper it refers to in what way the franchisor wants the franchise system to grow. Growth objectives can vary from 'mostly quantitative' to 'mostly qualitative'. Through quantitative growth, a franchisor aims to grow by means of adding more units to the franchise system, with relatively less concern for the performance of individual units. Through qualitative growth, a franchisor mainly aims at growing by means of improving the performance of existing units and/or by attracting units that fit certain criteria.

As was already indicated, these five franchise system characteristics result in five types of strategic compatibility.

Next to strategic compatibility, the franchise partners' perceptions of *operational compatibility (OC)* were proposed to influence their responses. 'Operational compatibility' refers to the alliance partners' perceptions of the way in which the relationship is implemented (Niederkofler 1991; Medcof 1997). Regarding operational compatibility in franchise relationships, a distinction was made in the following three factors:

- Operational compatibility regarding *capability*. This refers to each partner's capability to carry out its role in the relationship as perceived by the other partner (Medcof 1997). From the franchisee's perspective these capabilities refer to the franchisor's capabilities regarding managing the franchise system. Important capabilities of the franchisor are: the degree and quality of supporting its franchisees, purchasing prices, automation, logistics, communication, and information provision. In the eyes of the franchisor, the most important franchisee's capability is whether the franchisee is able to fulfill his financial obligations toward the franchisor, such as the payment of royalties.

- Operational compatibility regarding the *profitability* of the relationship. This concerns the net returns for both franchise partners in the relationship. From the franchisee's perspective, the profitability of the relationship is the result of the franchisee's turnover of his unit(s) achieved by applying the business format minus the costs of operating on behalf of this business format. These costs consist of the fees and royalties that have to be paid to the franchisor and investments that need to be made. From the franchisor's perspective, the profitability of a specific franchise relationship depends on the fees/royalties the franchisor obtains from the franchisee and possibly income from wholesaling activities.
- Operational compatibility regarding *trust and fair dealing*. This is about the degree to which the franchise partners trust each other. According to Nooteboom (1999,30): '*To have trust in the narrow sense, or "real" intentional trust is to accept or neglect the subjective probability that a partner will not utilize opportunities for opportunism even if it is in its interest to do so*'. Opportunism entails actions against the interest of a partner and against the letter or intent of an agreement, if necessary by cheating or concealment of the truth. In short, the research model states that when one franchise partner trusts the other, it means that the franchise partner believes that the other is likely to cooperate, even if he is not coerced to do so and has no direct material interest (Nooteboom 1999). Ring and Van de Ven's concept of 'fair dealing' is very close to trust (Ring and Van de Ven 1994). A partner perceives a certain degree of fair dealing when it has the impression that in the relationship with the other partner his benefits are proportional to his investments. This concept is related to trust because it requires the partners to represent the costs and revenues of the relationship truthfully and not to act opportunistically.

Next to strategic and operational compatibility, two other independent variables were hypothesized to influence the franchise partners' responses in their relationships. The first variable is the *attractiveness of available alternatives* (Emerson 1962), and the second variable is formed by the *switching costs*; i.e. the costs of switching to such an alternative (Emerson 1962; Nooteboom 1999).

The dependent variable of the model is represented by the responses that each franchise partner can adopt in the relationship at a certain point in time (see Fig.2). In the literature responses in relationships are often based on the work of Hirschman (1970), who makes a distinction between two general options for dealing with problematic situations in firms, organizations and states: '*exit*' or '*voice*'. The exit option refers to ending the relationship, while the voice option refers to actively expressing and discussing one's problems with the intent of trying to improve conditions. Hirschman argues that the presence of '*loyalty*' makes exit less likely. Loyalty refers to remaining silent and confident that the problematic conditions will get better by 'giving things some time'. Based on research on customer relationships, Ping (1993) adds a fourth option for dealing with relationship problems: '*neglect*', which means

passively allowing the relationship to deteriorate by 'letting things fall apart'. In a research on employer-employee relationships, Hagedoorn et al. (1999) argue that the category of voice responses is considered too homogeneous and needs to be differentiated further. Therefore, they distinguish between '*aggressive voice*' and '*considerate voice*'. Considerate voice consists of attempts to solve the problem concerning one's own concerns as well as those of the other partner. Aggressive voice is more destructive than considerate voice, but less destructive than exit. A partner who adopts this response wants to win, without considerations for the concerns of the other partner. This response can be seen as a 'cry for attention' between a destructive and constructive response.

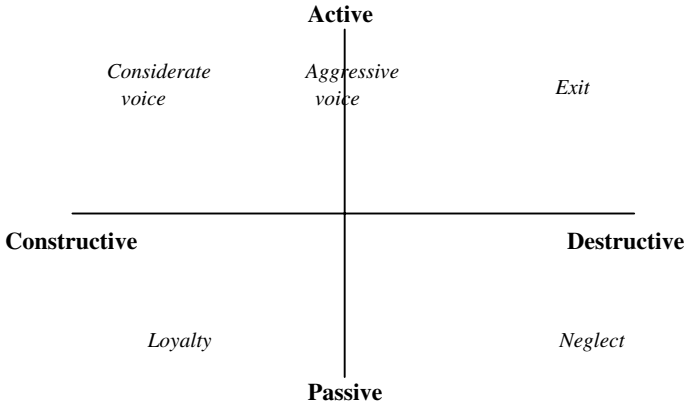


Fig. 2. Typology of responses in relationships (based on Hagedoorn et al. 1999)

3 Methodology

In this study, case studies have been used to gain insight into the strategic interactions between franchise partners. Not so long ago, qualitative research (including case studies) was considered as a research approach without precision (read: quantification), objectivity and rigor. This was due to the fact that methods of qualitative data analysis were not formulated adequately compared to those of quantitative data analysis. Only in recent years, authors have increasingly focused on procedures and criteria for evaluating qualitative research, for example Yin (1994), Eisenhardt (1989) and Miles and Huberman (1994). Yin's criteria are based on criteria common to all social science methods: construct validity, internal validity, external validity and reliability. *Construct validity* involves establishing the correct operational measures for the concepts being studied. *Internal validity* refers to determining causal relationships between variables. This was an important criterion for this study because the case studies are explanatory case studies. *External validity* deals with the domain into which the study's findings can be

generalized. The *reliability* of the study has two aspects; whether similar results would be obtained if the same research was repeated and whether the results would be similar if the same research was conducted by another researcher.

This section discusses the steps taken during the case studies in Phases 3 and 4 together with the instruments that have been used to satisfy Yin's criteria. A detailed case study design and a codebook were developed on the basis of the preliminary study (see Croonen 2006), and a case study database was developed during the case studies. According to Yin, this increases the reliability of the study. This section is actually a short version of the case study design.

In the larger study, four franchise systems in the Dutch drugstore industry were studied: DA, STIP, ETOS and Uw Eigen Drogist (UED). The focus on only one industry might have limited the external validity of this study, because it may be difficult to generalize the results by applying them to other industries. However, the drugstore industry is a retailing industry, and it was expected that the results could at least be generalized to other retailers. Moreover, the initial research model was developed on the basis of literature about different industries and interviews with franchisors and franchisees from different industries.

For each system two 'strategic change trajectories' (referred to as SCTs) were studied in which the franchisor aimed to make adaptations to one or more of the five franchise system characteristics. This was expected to result in changes in the franchisee perceptions of *strategic compatibility* and thereby resulting in certain responses by franchisees. For each SCT, the franchisor started with the introduction of the SCT to the franchisees, the franchisees adopted different responses in a reaction to it and the franchisor in turn adopted responses toward these franchisees, resulting in interactions between the partners. The case studies deal with *what responses* both franchise partners adopted during these SCTs and *why* they adopted these responses. This paper focuses on one of the four case studies, namely the Dutch DA system with its two SCTs (SCT1: 'Toward business-format thinking' and SCT2: 'Integration and renegotiation').

For each franchise system, one SCT was selected that occurred in the past and the other one was a contemporary SCT. In this paper SCT1 is a past SCT while SCT2 is a contemporary one. Leonard-Barton (1990) points at the advantages of having such a 'dual methodology' for case studies. She argues that a combination of real-time longitudinal case studies with retrospective case studies about the same phenomenon is advantageous because specific strengths in one method compensate for weaknesses in the other. The past SCT provided the opportunity to study developments over time; however, the most serious difficulty with the past SCT is that it is difficult to define causes and effects (internal validity). The contemporary SCT provided a better opportunity to establish cause and effect; however, due to time restrictions in the study it was not possible to conduct a real longitudinal study (see section 5).

Studying phenomena in retrospect can cause problems due to the dependence on interviewee recalls of past events. However, according to Leonard-Barton (1990) studies have shown that participants in organizational processes do not for-

get key events as quickly as one might suppose. Additionally, participants may remember events differently from the way they occurred. A problem relating to this is pointed at by Aldrich (1999), who calls it the 'retrospective fallacy'. This fallacy refers to viewing earlier events as though they were controlled by their subsequent outcomes, while other outcomes might have been equally possible. Aldrich refers to several examples where authors explained certain historical outcomes by factors that could not have been known at the time. In the case studies the use of multiple sources of data next to interviews with participants helped to increase the internal validity of the research. The following data sources were used in the case studies: information from specialist magazines, year reports, franchise contracts, format handbooks, and most importantly, interviews with different managers from the franchisor's organization and interviews with franchisees. These multiple sources provided additional information on important events as well as on the sequence of these events so that it could be noticed when a respondent's story did not correspond with the other respondents and data sources. Moreover, according to Yin, such 'data triangulation' helps to improve construct validity. Another instrument with respect to construct validity was the preliminary study in which constructs were developed based on existing literature and interviews with franchisors and franchisees in various systems.

Robson (2002) indicates that the internal validity of three types of qualitative research, namely description, interpretation and theory building, is subject to different threats.

In *describing* phenomena there is a risk that the data are incomplete or inaccurate. According to Robson (2002) this implies that when collecting data, audio- or videotaping should be used. In Phase 1 audio taping was not used, but instead notes were taken. From Phase 2 onward, the interviews were audiotaped in order to increase the accurateness and completeness of the data.

With respect to *interpretation* the greatest danger is to artificially construct a framework or meaning of what happened rather than allowing this framework to emerge from the knowledge acquired during the research. In this study several data displays have been used to present the data of each case in a standardized way so that certain patterns and/or explanation could be detected more easily and conclusions could be drawn more effectively.

As regards *understanding*, Robson (2002) points at the following three threats to validity: reactivity, respondent bias, and researcher bias. Reactivity means that the researcher's presence may interfere in some way with the setting on which the study is focused and especially with the behavior of the people involved. Since the study was partly retrospective and the behavior of the people involved could not be influenced, this risk was reduced. Respondent bias can occur in different forms, for example, by withholding information or by providing answers which, in the respondent's view, the researcher may want to hear. Researcher bias refers to a researcher's assumptions and preconceptions, which may influence the way in which he/she behaves in the research setting. One important strategy for dealing with the abovementioned problems consists of different forms of triangulation:

data triangulation, observer triangulation, methodological triangulation and theory triangulation (Robson 2002). In this study, data triangulation was used by collecting data from multiple sources, theory triangulation was used by adopting multiple perspectives in the research model, and observer triangulation was used by means of discussing results with fellow researchers.

Managers from the franchisor's organization were asked to estimate how their franchisees were divided over the five response types directly after the introduction of the SCT and to give a few names of franchisees for each response type. The aim was to interview at least two franchisees per response type for each SCT. In the selection of franchisees to be interviewed, it was monitored whether the selection of franchisees would not become too one-sided (i.e. focusing on certain types of responses).

The franchisees were contacted and were asked whether they were willing to participate in the study by means of a structured interview with open-ended questions in his/her store. These interviews took about 75 minutes. For understanding the franchisor's perspective, several members of management1 (SCT1) and management2 (SCT2) were interviewed. Table 1 presents an overview of respondents.

Table 1. Overview of respondents for the DA system

At franchisor's organization (Dynadro BV)	**Function**	**Date**
For SCT1	Manager (during SCT1)	17-04-2003 26-09-2003
For SCT1	Manager (during SCT1)	19-05-2003
For SCT 1	CEO (during SCT1)	03-02-2004
For SCT2	CEO (during SCT2)	03-07-2003
For SCT2	Manager (during SCT2)	28-08-2003
Franchisees		
Total of franchisees interviewed for the DA system: 19 Franchisees interviewed about both SCT1 and SCT2: 6 About SCT1: 13 franchisees About SCT2: 12 franchisees		

In the third phase detailed analyses were conducted of what responses individual franchisees adopted and why during the SCTs. As pointed out, several data displays were used in these analyses. For all SCTs, the development in franchisee responses was presented in a figure (see Fig. 3 for SCT1). In these figures, each number represents an individual franchisee. In the detailed analyses each response type ('X-response' as example) is discussed according to the same structure. The franchisee responses are the point of departure here. The structure is as follows:

- Responses preceding the X-response (dashed lines in Fig. 3).
- The X-response as initial response (bold numbers in Fig. 3). This is the focal point of analysis where the 'determining variables' and the franchisee perceptions on these variables are discussed to explain why they adopted the X-response. With 'determining variables' is meant which variables franchise partners take into account when adopting a response.
- Responses subsequent to the X-response (normal lines in Fig. 3).

In the detailed analyses, the franchisor's responses to the franchisee's responses are also discussed in detail, but this paper only presents the most important results.

4 Case Study: Dutch Druggists in Distress

This section discusses the franchise partners' responses during SCT1 and SCT2 and their reasons for adopting these responses. As the title of this section indicates, several druggists were in distress about the changes during SCT1 and SCT2, which made it interesting to study their responses and those of the franchisor.

4.1 Introduction to the DA System and its SCTs

In 1942, five Dutch druggists started a cooperative called 'Dienende Actie' (DA), which can be translated as 'Serving Action'. They were dissatisfied with the turnover of their businesses and the performance of their suppliers and decided to form a mutual support network. In the early years, the DA druggists only focused on joint purchasing and the use of the DA name on their stores. In 1947, the name 'Dienende Actie' was changed into 'Drogisten Associatie' ('Druggists Association'). In the years that followed, the group of DA druggists grew rapidly and its activities became broader. In 1950, the DA system already consisted of 150 druggists. In 1960, it had grown to 500 druggists and in 1982 even to 1000.

At the outset of SCT1 in 1992, the DA system was loosely organized, and DA stores varied from small stores in villages, to medium stores in towns, to large and luxury stores in city centers. Management during SCT1 (management1) intended to develop different systems with distinguishable business formats that would be suited for these different types of stores. Management1 aimed at making each system more homogeneous in terms of types of stores, which would make a structured and standardized approach and therefore uniformity for each system easier. The most important change during SCT1 was the increasing hardness. Management1 aimed to change DA from a very soft system to a hard system. Moreover, management aimed to adapt DA's positioning from relatively high in the market to a middle positioning and to increase DA's rate of innovation.

Management1 only partly reached its goals for SCT1. After a process of ten years, it had not succeeded in introducing a franchise contract for all franchisees

and the DA system still was not very uniform. In 2003, a new management (management2) started and it introduced SCT2. Management2 aimed to introduce three changes. First, DA had to be merged with other drugstore systems of the franchisor into one DA system with a new commercial policy. Research had shown that DA was well-known among consumers, while consumers were not very familiar with the franchisor's other two systems. To benefit from the well-known DA name, management2 thought these systems should be added together into one new DA system with an even better-known name and a somewhat lower positioning. Second, management2 aimed to introduce a standardized contract between Dynadro and all its druggists. This had been an issue of discussion between management1 and the druggists for several years. Management2 thought that such a contract was necessary for the new DA system in order to improve its decisiveness and DA's degree of uniformity. In other words, management2 wanted DA's hardness to increase. Third, management2 aimed to speed up decision making processes and to improve the transparency of these processes both within the organization itself and toward its franchisees. In earlier years, there had been many Boards that had been involved in decision making and management2 was aware of difficulties with franchisee strategic participation in earlier years. Therefore, management2 aimed to adapt the organization of franchisee strategic participation.

4.2 Understanding the Franchise Partners' Responses During the SCTs

4.2.1 Understanding Franchisee Responses

Fig. 3 presents the development in responses of the franchisees interviewed for SCT1. A limitation of Fig. 3 is that it does not indicate the time lapses between the switches of one response to another, while these varied from a few weeks or months to several years. For a better understanding of the development of responses, I refer to the detailed analyses in Croonen (2006).

First of all, Fig. 3 shows that franchisees switched between responses in a reaction to the developments during SCT1 over time. This also became clear from the Figures that were drawn for the other SCTs. The following insights about franchisee responses are based on the detailed analyses for SCT1 and SCT2:

1) Adapting the response typology.
2) Understanding franchisee responses during the SCTs.
3) Triggers for response switches.

1) Adapting the response typology

The analyses reveal the existence of a new response type (see Fig. 3). This is 'ambiguous loyalty'. It refers to a response where a partner does not know how to react and therefore passively waits to see what happens before adopting any further re-

sponses. It is more destructive than loyalty but less destructive than neglect, and therefore it is considered a separate response type. For management, this franchisee ambiguous loyalty was difficult to detect; most of the time management considered these franchisees as loyal while in actual fact this franchisee loyalty was ambiguous.

2) Understanding franchisee responses during the SCTs

From the analyses, it turned out that for understanding *why* a certain franchisee adopted a certain response at a certain point in time the following factors are important:

A) The franchisee's 'determining variables' at that point in time.

B) The franchisee's perception on these determining variables and his future expectations on these determining variables.

C) The franchisee's thresholds on these determining variables.

These factors are discussed below.

2A) The franchisee's determining variables

First of all, it turned out that during both SCTs for almost all franchisees, OC profitability was the most important independent variable. Moreover, several franchisees emphasized their *cost level* as part of profitability because they considered their turnovers as stable. These franchisees thought they could not improve their turnover and profitability by means of extra investments and costs[3]. For these franchisees, the increasing degree of hardness was undesirable because it would increase their cost level without increasing their turnover. For some franchisees SC hardness was the most important variable. These franchisees considered their status as a small business owner as very important and therefore they rather wanted to be part of a soft system rather than a hard system. During SCT1 several of these franchisees had stayed because of the low enforcement by the franchisor, but during SCT2 they felt that management2 would actually enforce the obligations and cost levels would actually increase and they started adopting more active responses.

Nevertheless, SC hardness was a very important variable for all franchisees. During both SCTs all franchisees had to deal with the tension between their desired degree of hardness and their cost level. DA franchisees differed in the degree to which they considered a well-known brand name as important and therefore differed in their desired degree of hardness. Franchisees who did not consider a well-known brand-name as important mostly looked at the cost level of participating because they considered their turnover levels as stable. These franchisees perceived a decreasing SC hardness and decreasing OC profitability during the SCTs.

[3] This was mainly caused by their competitive circumstances. These franchisees often owned smaller stores in villages with relatively stable competitive environments. The franchisee's competitive circumstances turned out to be an important 'background variable', see the discussion in section 5.

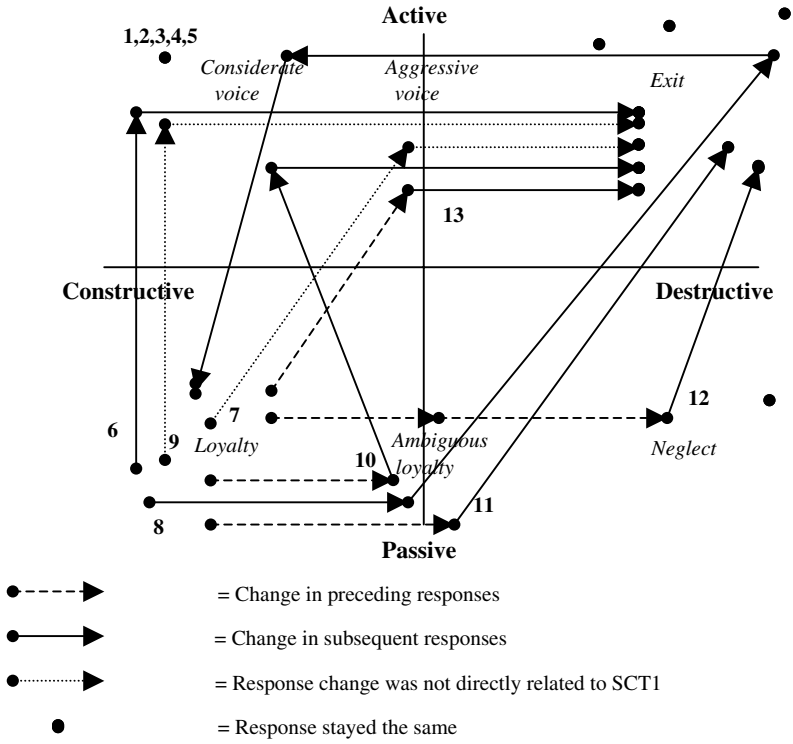


Fig. 3. Development of franchisees' responses for SCT1

For SC positioning and SC innovativeness, the analysis demonstrates that these became more important once the degree of hardness increased. During SCT1, some obligations on positioning and rate of innovation were introduced and therefore the franchisees considered it important to have a certain degree of strategic compatibility with the franchisor on these aspects. Franchisees during SCT2 had the same determining variables as for SCT1, but the difference with SCT1 is that SCT2 involved more obligations on these variables. Therefore, SC positioning had become an even more important variable for the franchisees during SCT2 than during SCT1. The same applied to rate of innovation.

Because of the increasing obligations during both SCTs OC trust/fair dealing and SC strategic participation had also become more important variables for the franchisees. OC trust/fair dealing had become important because the franchisees felt they would become more dependent on the franchisor due to the increasing obligations. The franchisees therefore wanted to trust that the franchisor would not act opportunistically and that costs and benefits of the relationship would be divided fairly between the franchise partners. Before the introduction of SCT1, several franchisees had had a low perception of OC trust/fair dealing for a long time because they had had the idea that the franchisor aimed to receive extra royalties

by charging higher prices on purchasing, automation etc. The franchisees considered these 'implicit charges[4]' as very intransparent; they did not know what the real costs were and what the additional charges were. However, this low OC trust/fair dealing became a problem only after several obligations were introduced because from that time franchisees were obliged to purchase certain goods and services from the franchisor (to which the 'implicit charges' applied). The same applies to SC org. The largest part of DA druggists perceived a low SC franchisee strategic participation due to a lack of procedures. The DA-Boards[5] did not have any decision rights and the majority of franchisees perceived a high degree of unfairness in the selection of franchisees to be involved in these Boards. The franchisees' low perception of SC strategic participation only became a problem once obligations were introduced and the franchisees felt that they became more dependent on the organization of franchisee strategic participation. This was considered especially important since DA has started as a cooperative that was owned by the druggists themselves. OC trust/fair dealing and SC strategic participation became even more important during SCT2 because even more obligations were introduced during SCT2.

There were some variables that franchisees considered less important during both SCTs. From the variables of strategic and operational compatibility, OC capability and SC growth objectives were considered not determinant during SCT1 because there were very few obligations for franchisees for which they depended on the franchisor's capabilities and there were no obligations due to growth objectives. During SCT2, OC capability also became more important because the new franchise contract stated several obligations with respect to services that had to be taken from or via the franchisor, such as automation and purchasing. However, OC capability was still considered less determinant than the other variables because franchisees expected that problems with franchisor capabilities could be solved on relatively short term and these services would not be better when offered by another party or when the franchisee arranged these by himself.

The attractiveness of alternatives and switching costs were not determinant during both SCTs. Franchisees first evaluated the attractiveness of their current relationship based on their perceptions of strategic and operational compatibility. Only after a franchisee evaluated the relationship as 'unattractive' he started to evaluate alternatives and switching costs. Sometimes franchisees adopted a not so attractive alternative, mostly when a franchisee felt 'forced' to exit. The same applied to switching costs.

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[4] According to Caves and Murphy (1976), 'implicit charges' are an instrument for franchisors to appropriate rents from franchisees. However, in the DA case this resulted in a low perception of OC trust/fair dealing on the part of the franchisees.

[5] During SCT1, there was not one Franchise Advisory Council, but there were various commissions and working groups of franchisees. For the sake of simplicity, these are referred to as 'Boards'.

2B) The franchisee's perception on determining variables and future expectations

For understanding a franchisee's response toward the franchisor at a certain point in time, it is not only important to understand what this franchisee's determining variables are, but also the franchisee's perception of these variables and his expectations for the future. Several franchisees knew that their objectives differed from the ones of the franchisor and therefore expected lower degrees of compatibility on certain aspects in the future. However, during SCT1 management1 did not really dare to enforce several obligations because it was afraid of destructive responses by franchisees and therefore franchisees still perceived a great deal of freedom in running their businesses and did not feel the need to respond actively. Over time, the obligations slightly increased which resulted in several franchisees adopting more active responses.

2C) The franchisee's thresholds on determining variables

The analyses show that franchisees had certain thresholds on their determining variables; franchisees accepted a certain level of strategic and/or operational compatibility. Only after their perceptions of their determining variables had reached below their thresholds franchisees were triggered to adopt another response to deal with this (see point 3 below). In the years after the introduction of SCT1, several franchisees still perceived a medium –instead of low- score on their determining variables even though management had very different objectives. Management1 did not really enforce the obligations and the franchisee still had much freedom. In other words, due to the low enforcement by management1, several franchisees had not reached their thresholds on their determining variables and they just remained passive. Management2 argued that it would enforce obligations more strictly. However, it is difficult to determine whether the degree of hardness actually increased because this process is still going on.

3) 'Triggers' for response switches

Fig. 3 shows that most interviewed franchisees switched between responses over time during SCT1, except from some 'considerate-voice franchisees'. This was also the case for SCT2. These franchisees had close relationships with management and therefore almost automatically adopted considerate voice. During the SCTs, several franchisees switched from a passive response to a more active one at a later point in time mostly because they reached their thresholds on their determining variables and felt that they needed to take action. Some of them immediately adopted exit while others adopted considerate voice to try to solve their issues. What responses individual franchisees adopted highly depended on their individual situations, such as their competitive circumstances, personality, or age (these are so-called 'background variables', see section 5). Based on SCT2, it became apparent that another trigger for franchisee response switches was in the responses of the franchisor. For example, there was one franchisee with several stores who decided to exit immediately after the introduction of SCT2. However,

for the franchisor he was an important wholesale customer and franchisee who was very profitable (high OC profitability). Moreover, the franchisor would loose several locations if this franchisee exited. Therefore, the franchisor tried to keep this large franchisee by means of threatening with a lawsuit (aggressive voice). Because the franchisee did not want a lawsuit, he adopted considerate voice, and, eventually, the franchise partners came to an agreement and the franchisee stayed in the system.

4.2.2 Understanding Franchisor Responses

The franchisor's responses were more 'stable' than the franchisee responses; management adopted mostly passive responses during both SCTs. Only toward some franchisees the franchisor adopted considerate voice because it believed these franchisees could help in creating support among the large group of franchisees for adopting the proposed changes.

For both SCTs, for the franchisor it was a necessary condition that franchisees could fulfil their financial obligations to the franchisor (OC capability). In other words, OC capability was always a determining variable for the franchisor. Additionally, in deciding how to respond to franchisees, management had to deal with a certain tension, especially toward franchisees who did not want to adopt the obligations. Management1 wanted a certain degree of hardness and therefore it considered SC hardness as important. However, some franchisees did not want the increasing hardness and did not want to adopt obligations. This would result in a low SC hardness with this franchisee from the franchisor's perspective. However, franchisees were a very important source of income for the franchisor because of the payments of royalties and because they were (at least supposed to be) wholesale customers of the franchisor. In other words, individual franchise relationships had a certain degree of profitability for the franchisor (OC profitability) and the franchisor rather did not want to loose franchisees with a high profitability. Additionally, with the loss of a franchisee, the franchisor would also loose the store's location, which it took into account in adopting a response.

For management2 the tension between imposing and enforcing obligations and the risk of loosing profitable franchisees became even bigger, because it now *really* wanted to enforce obligations. The higher the desired degree of hardness and profitability of the franchisee for the franchisor, the larger the tension; especially when a very profitable franchisee did not want to adopt certain obligations.

5 Conclusions and Discussion

First of all, an important conclusion from this paper is that franchise relationships are more dynamic than so far assumed in most franchising literature. This supports Clarkin and Rosa's (2005) conclusion that there are complex and dynamic patterns of relationships between franchisors and franchisees. More in-depth research is re-

quired that views franchise relationships as dynamic. Such approaches also involve requirements with respect to the methodology. According to Langley (1999), research on dynamic phenomena has been approached in two ways. Some researchers have used coarse-grained research approaches in order to test a-priori formulated theories, while others have used fine-grained qualitative research approaches in an attempt to build theory. The current franchising literature is often based on coarse-grained approaches (Elango and Fried 1997). A relevant suggestion for further franchising research is to conduct in-depth longitudinal studies in which the responses of partners toward each other are traced over a longer period of time.

The DA case has shown that when the franchisor tried to increase the hardness of the system the franchise relationships became more complex because a higher hardness resulted in a higher dependence between the partners and therefore more determining variables. The case study also shows that a difference should be made between the *desired* hardness by the franchisor and the *actual* hardness of the system. Several franchisees adopted destructive responses in a reaction to the introduction of the obligations, such as not adopting obligations or negotiating about them and exiting the franchise system. The franchisor did not really dare to enforce obligations because it was afraid of loosing these franchisees. Future franchising research should deal with such issues of negotiation and tensions in franchise relationships because this may have an important influence on the realization of strategic objectives and the performance of the franchise system (cf. Tuunanen and Hyrsky 2001; Clarkin and Rosa 2005).

Additionally, issues of trust and fair dealing and the organization of franchisee strategic participation became more important in the eyes of franchisees when the franchise system actually got harder. Especially, the issue of trust and fair dealing requires some extra attention in the franchising literature because current literature has hardly paid any attention to it, while a lack of it may lead to destructive responses by franchisees. Croonen (2006) distinguishes several forms of trust within franchise systems and discusses several instruments that the franchisor can use to increase the franchisee trust in the franchisor and its system.

Another important conclusion from this paper is that responses in relationships are more heterogeneous than so far suggested in the literature. An important contribution of this paper is the addition of the 'ambiguous loyalty response' to the existing response typology as presented by Hagedoorn et al. (1999). Ambiguous loyalty is a form of passive response which is more destructive than loyalty, but less destructive than neglect (see Fig. 3). Franchisees adopting these responses were in doubt of how to react to certain changes and therefore waited to see what would happen and how this would affect their relationship with the franchisor. It is highly likely that ambiguous loyalty also occurs in other forms of human interaction, such as other forms of networks or strategic alliances. One partner's ambiguous loyalty may be 'dangerous' for the other partner because it is not so easy to detect, and it might lead to unexpected exits by valuable partners.

In the larger study, several variables have been distinguished that have an indirect or moderating influence on the relationships between the independent variables and the responses ('background variables'). As section 4.2.1 pointed out, the

franchisee's location and its competitive circumstances largely influenced how a franchisee perceived the relationship with the franchisor, and therefore this influenced his responses. Croonen (2006) distinguishes a total of four categories of background variables from the franchisee's perspective: store characteristics (e.g. the location/competitive circumstances, store performance), franchisee characteristics (e.g. psychological characteristics of franchisee, age, history of the franchisee), franchisor characteristics (e.g. management style), and characteristics of the franchise system (e.g. degree of company owned units, history of the franchise system). The franchisees in the DA system differed with respect to their background variables, and this explains differences in their determining variables, their perceptions of these variables and, as a result, their responses toward the franchisor. In the entrepreneurship literature, it is increasingly recognized that entrepreneurs/small business owners form a heterogeneous group. However, in the franchising literature this is not (yet) apparent; there are only a few studies that distinguish different types of franchisees in general and within franchise systems (cf. Dant and Gundlach 1998).

One final comment that has to be made is that the DA system is a specific case because of its cooperative structure: the DA druggists were also the owners of the franchisor's organization. This especially influenced the franchisee perceptions of SC strategic participation. Due to the cooperative structure, DA franchisees considered a high degree of organization of franchisee strategic participation as important, and since this was generally low this often resulted in destructive franchisee responses. In the other case studies (except STIP because this was from the same organization), the organization of strategic participation was considered as less important. ETOS had a large number of company-owned units with which the franchisor could convince the franchisees that it would take franchisee interests into account when it increased obligations. At UED franchisees considered a high degree of franchisee strategic participation as not necessary because their system was still relatively soft and they still had much room in running their businesses.

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PART B:

Strategic Alliances

Governance Structure Issues
Performance of Joint Ventures

Administrative and Social Factors in the Governance Structure of European R&D Networks

Nieves Arranz and J. Carlos Fdez. de Arroyabe[1]

Abstract. This paper analyses governance structures used to organize partnerships in R&D networks emphasizing the degree of administrative and social factors they embody. Data was obtained from European R&D networks created through Framework Programmes, which include a great number of universities, non-profit institutions and firms. We argue that governance structures are related to the applicability of the technology developed in the network. Findings show that two kinds of networks exist in which administrative structures as well as the openness and cohesion of the R&D network have different relevance in governance structures. This study not only provides a theoretical model to analyse governance structures of these networks, but is also useful both for improving the management of networks and for fostering collaboration at an international level.

Keywords. R&D networks, governance, administrative and social factors

1 Introduction

The number of R&D alliances has increased substantially during the last decades, in companies as well as public administrations (Hagedoorn et al 2000). R&D networks are considered contractual structures used to organize partnerships in R&D development (Powell and Smith-Doerr 1994; Ring and Van de Ven 1992 and

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1994). Ring and Van de Ven (1992) and Teece (1992) state that R&D networks are a form of business organization, although there is great dispersion on how to approach the different governance structures of R&D networks.

With the aim to contribute to the theoretical and empirical literature on R&D networks, we will approach the analysis of governance structures in networks from two points of view. Firstly the more classic view, from a transaction cost approach which states that different governance modes can vary from more structured forms -near to the enterprise- and less structured forms -near to the market- (Williamson 2002). The objective of this approach is to minimize transaction costs. Secondly, from the social capital approach which considers networks as a social form of interrelation (Gulati 1998; Gulati et al. 2000). From this viewpoint, governance modes range from highly cohesive and closed networks to opened and sparse networks. The variability of these modes is a function of the exploitation or exploration degree of information. Additionally, in the literature (Brockhoff 1992; Sakakibara 1995, 1997; Trott 1998; Savioz and Sannemann 1999), activities and objectives of R&D networks are measured by means of applicability which has the attributes of immediacy and acceptability: immediacy in its utilisation and acceptability in the market. Thus, the networks undertake different activities, ranging from generic activities centered on basic research to applied activities centered on product development (Teece 1992; Kotabe and Swan 1995; Hagedoorn et al. 2000).

This study sets out to provide the theoretical basis and empirical evidence to analyse the governance structures in R&D networks. With this aim, we have revisited the main theoretical and empirical studies on this subject, selecting those factors with the greatest significance in the literature concerned. Hence, a series of key factors relevant to the governance structures have been identified and clustered into two categories: those derived from the transaction cost theory and those derived from considering the R&D networks social structures of ties embedded in the environment. The first category includes structural mechanisms –planning criteria, solving problems and the organisation of activities between partners– and safeguards mechanisms –such as the selection of a partner, the definition of responsibilities or the monitoring and control in the R&D network– (Geringer and Herbert 1989; Gulati and Singh 1998; Fdez. de Arroyabe and Arranz 2000; Artz and Brusch 2000). The second category specifies the degree of cohesion and the degree of openness of the network, which are related to the management of information in the network and the technological results obtained (Robertson and Gatignon 1998; Gulati 1998; Rowley et al. 2000). Furthermore, we are interested in the effect that the two groups of factors may have on the technological results of R&D networks. Therefore, taking the relationships between partners in a R&D network as a unit of analysis, we will offer findings for different kinds of networks.

Once analysed, the approaches on governance structures will be looked at in the next section, we will formulate the hypotheses for further contrast in section three. In section four, the sample employed will be described, together with the measures used for each variable involved. Finally, the main results will be presented and conclusions formulated. Future lines of research will be indicated.

2 Background on Governance Structures in R&D Networks

Gulati (1998) defines governance structures as the formal contractual structures used to organize partnerships in strategic alliances. Williamson (2002) for his part, points out that the objective of governance structures is to infuse order in a relation where potential conflict can arise, and where opportunities to make common gains exist. Williamson (1991) also illustrates that the mode of governance depends on the incentive intensity, the administrative controls and the legal rules regime.

R&D alliances as voluntary arrangements between two or more firms, as pointed out by Gulati (1998), require a suitable governance structure; it has the objectives of solving conflicts (Lorange and Roos 1992; Mohr and Spekman 1994), coordinating common tasks (Geringer 1988, 1991) and distributing results (Ring and Van de Ven 1994). In sum, the objective is to increase the probability of success of the alliance (Killing 1983; Harrigan 1986; Doz 1988; Ring and Van de Ven 1992, 1994; Saxton 1997; Gulati 1995, 1998).

Governance structures in R&D networks have their own singularities, amply reflected in the literature. Baker (1990) considers that networks are characterized by high degrees of flexibility in their structure, decentralized planning and control, and lateral links instead of vertical links. Other authors remarked that technological networks are founded on a simple consensus-based structure (Fdez. de Arroyabe and Arranz 2000; Gulati et al 2000; Williamson 2002). Thus, the network promoter, whose capacity of decision taking and supervision is limited, generally takes on coordination, which is subject to the consensus of partners (Nooteboom et al 1997; Gulati 1998). There is not a marked hierarchical structure, and lateral links serve as the main mechanism for coordination between partners (Gulati 1995).

Another characteristic that influences governance structures is the dilemma between conflict and cooperation (Gulati 1998; Williamson 2002) which arises in networks because they are made up of firms and organizations which have their own objectives, which do not always coincide with the objectives of the network. This circumstance can generate discrepancies among partners (Killing 1983; Gomes-Casseres 1987). Marschak (1974) has described this situation based on the concordance of objectives using three levels: team, foundation and coalition, that is, ranging from unanimity among partners to discrepancy. This feature of networks makes the inclusion of certain safeguard mechanisms necessary in governance structures with the objective of mitigating situations of potential conflicts (Gulati 1998). Some authors differentiate between ex-ante and ex-post safeguards mechanisms (Contractor and Lorange 1988; Hill 1990; Balakrishnan and Koza 1993). In the first one we can include the very process of selecting a partner (using criteria such a trust and commitment, previous experiences, and so on) and professional skills. Other ex-ante mechanisms appear

in the contractual definition of responsibilities among partners in terms of contributions and distribution of benefits. As for the ex-post mechanisms, these are based on control systems of the activities and on the objectives that each partner must achieve. A variety of control mechanisms exists that range from regular reporting to the meetings among partners.

In spite of these common characteristics of technological alliances, we find a great variety of forms in the governance structure of alliances, as indicated by Powell (1987, 1990). This has generated a line of investigation in which the key explanatory variable is the choice among alternative modes of governance (Williamson 2002) He considers the alliance as a contractual form between the market and the firm. In a heuristic way, he states that the choice of a governance structure shifts from the market to the firm. This can be interpreted as the move from simple to complex. Explain similarly, Imai and Itami (1984) consider alliances as hybrid forms of organisation between the market and the firm. For these authors the structure of alliances varies from those forms closer to the market (in which the interaction between agents and the existence of common objectives are infrequent) to those closer to the firm (in which case there is greater the interaction and concordance of objectives). In general, in the transaction costs approach the explanatory variables for governance structures are specificity and appropriability (Robertson and Gatignon 1998). Here, the objectives of governance structures are minimising transaction costs and opportunistic behaviour, turning them into structural mechanisms and appropriation costs. From this point of view the more the specificity of an alliance, the more structured form of governance and the greater the appropriation of technology the greater the safeguard mechanisms.

Nevertheless, the exclusive use of transaction cost approach is considered insufficient to explain the governance form of alliances. Numerous studies (Powell 1990; Ring and Van de Ven 1994; Gulati 1995) show the need to introduce other variables to explain the governance form of alliances. Thus, the degree of interaction between partners, the degree of external openness and the cohesion of the network are variables that intervene in the definition of governance forms. Transaction costs has therefore been enriched by other approaches (see Powell 1990; Zajac and Olsen 1993). Furthermore, Gulati (1998) shows the importance of social structures resulting from prior interaction between partners. He suggests that firms select contractual forms for alliances not only based on the activities they include and the related appropriation concerns they anticipate at the outset, but also on the basis of the existence of the social network of prior alliances in which partners may be embedded (Gulati 1995). Thus, the development of joint R&D projects in a network implies the execution of activities that will create interactions and contacts in the dynamic process of the accomplishment of objectives. Powell (1990) suggests that R&D networks are social networks with a series of interrelated nodes (that comprise institutions and individuals), which permit networks to be defined in terms of structures of ties. These networks of contacts between actors can be an

important information source for participants, and therefore, the ties (or the relations between agents) and the information in the network acquires a great importance in the definition of governance structures. The strength or weakness of ties will be based on a combination of length of time of the tie itself, emotional intensity, intimacy or mutual confidence, and reciprocal services between the partners of network (Granovetter 1973).

Many authors have justified the ties between partners as a mechanism of governance structures since strong ties develop a shared understanding of the utility of certain behaviours as a result of discussing opinions in highly socialized relations, which in turn influence their actions (Gulati 1998; Rowley et al. 2000). In addition, these strong ties increase the mutual gains, the reciprocity and the long-term perspectives through a history of interactions (Powell 1990; Larson 1992). Therefore, strong ties serve as a part of the social control mechanisms that govern partnership behaviour. According to Granovetter (1973), an actor's collection of weak ties is more likely to be a sparse governance structure reaching divergent regions of the surrounding networks. Networks in the weak tie class require less coordination of activities across partners and therefore less interaction in terms of frequency and depth.

Completing this theoretical approach, Hagedoorn et al. (2000) indicate that technological projects must have external links in order to search for information and knowledge. In this sense, numerous studies emphasise the importance of external sources of knowledge for new product development (Nonaka and Takeuchi 1995; Peters and Becker 1998; Teece 1998). Therefore, we can consider R&D networks as organizational units, which have the objective of developing technological processes via outside interactions. The last argument allows us to define R&D networks as social structures of ties (Granovetter 1985), embedded in the environment looking for information on the market (Powell and Smith-Doerr 1994) or technology knowledge (Nonaka and Takeuchi 1995). The variety of governance forms from this approach is illustrated by Dyer and Nobeoka (2000). These authors show two distinct activities through the case of Toyota's suppliers pointing out that two kinds of networks exist depending on the processing of technological knowledge. The first one network serves to explore information with a great number of partners, and is characterized by low cohesion and weak ties between partners. Its objective is to obtain technology information. Granovetter (1973), in this sense, argues that weak ties are conduits across which an actor can access novel information. On the contrary, the second one constitutes a highly cohesive network with strong ties and a small number of partners and which has the objective of exploiting information in order to, for example, obtain an innovative product. Rowley et al. (2000), indicates that strong ties are the appropriate channel to transfer tacit knowledge. Hence, from this approach, we can consider that the networks will vary from the very integrated with strong ties and whose fundamental goal will be to exploit information, to networks which are sparse and open with weak ties, and whose aim is to explore information.

3 Hypotheses

To analyse the variability of governance structures in R&D networks we will analyse two factors: the kind of activity developed and the technological objectives of network. The field of technology management classifies technological activities in function of their applicability (Brockhoff 1992; Sakakibara 1995, 1997; Trott 1998; Savioz and Sannemann 1999). Technological activities can be classified as ranging from generic activities with low applicability (such as basic research) to those that generate products with immediate application, such as technology transfer or product development. Applicability refers to the immediacy or quickness in use or acceptance by the market of a technology. Dosi (1988) points out that basic research involves high levels of uncertainty in terms of expected results and time. We classify basic research therefore as an activity with low applicability.

From this perspective the concept of applicability can be related to the transaction costs view. Thus Brockhoff (1992) links applicability with appropriability. He explains that the more general and less applied the research is, the greater the degree of uncertainty will be, the retrieval period of investment, and the difficulty of appropriation of the results. Hence, greater applicability corresponds to greater appropriability and therefore to an increased risk of opportunistic behaviour and the need to create safeguards mechanisms. This argument leads to the following hypothesis:

Hypothesis 1: The greater the applicability of the technology managed in R&D networks, the greater the importance of safeguard mechanisms for its governance.

A second question to deal with is how to relate applicability with specificity of technology. Asset specificity is a major aspect of transaction cost theory. Technological development in a network involves partners signing a contract, which requires specific investments to transact, generating a relationship of mutual dependence (Robertson and Gatignon 1998). These technological specific assets involve investments in human and physical capital that cannot be redeployed without losing productive value. A product or technological activity with high applicability has a more restricted alternative use and can be considered a very specific product in its application. In the logic of transaction cost theory, greater specificity of assets involves contractual or organizational forms which are very structured and nearer to firm. Therefore, the greater applicability of technological activities developed in the network the more highly structured form of governance. Thus, we can propose:

Hypothesis 2: The greater the applicability of technology managed in R&D networks, the greater the importance of structural mechanisms for its governance.

Conversely, we have seen that networks can be analyzed from a social perspective as social networks. The generation of technological knowledge requires the development of activities of exploration and exploitation that, in many cases, can take place simultaneously (March 1991). This author also points out that explora-

tion entails essentially the experimentation of new possibilities and alternatives and, in the same sense, Rowley et al. (2000) indicate that experimentation might lead to future innovations and increased profit. Exploitation, as March shows, is the refinement and extension of technological competencies to develop current competitive advantages. As we have indicated, applicability means immediacy in the application of a technology, therefore, we can point out that the higher the applicability of a technology the greater its degree of exploitation. Furthermore, we have seen that the activities of exploitation are developed in highly cohesive networks and, therefore, we can say that networks which develop activities with a high degree of applicability, will be networks based on strong ties among the partners. Hence, we can propose:

Hypothesis 3: The greater the applicability of technology managed in R&D network, the greater the importance of cohesion for its governance.

Similarity, we can relate applicability with the exploration activities. As we have pointed out, a characteristic of technological exploration activities is the minor degree of applicability (March 1991; Rowley et al 2000). These activities are developed through sparse networks, with weak ties among the partners. Consequently, we can say that technological activities of lower applicability are developed in networks with low cohesion and weak ties among partners and will have numerous external contacts to seek information. Hence, we can propose the following hypothesis:

Hypothesis 4: The lower the applicability of the technology managed in R&D network, the greater the importance the degree of openness for its governance.

4 Methodology

4.1 Sample

Having identified the initial conditions and variables, we use data collected from a large sample of joint projects developed into R&D networks to further explore their forms of governance structure. The data were collected in 1999 on joint projects developed under the III–IV R&D Framework Programme the European Community, between the years 1990 and 1998. A sample of 202 institutions was selected for a mail survey. The horizontal character of Science and Technology Policy goals has forced us to consider a large number of projects among the different activities marked in the III and IV Framework Programmes (information technologies, telematics, industrial and material technologies, environment and climate, socio-economic research, agriculture and fisheries, and so on).

During this period, a great number of industrial liaison organisations (ILOs) from different sources (universities, non profit institutions, corporate groups, consortiums of institutions, and so on) have participated with high frequency (nearly 90 percent of response rate) in R&D projects.

The distribution of replies by country includes 16 from the EU and EFTA (see Table 1). The basic results of the networks typology show that the most frequent type of partners are universities, industrial partners and research institutes, followed by consultants. The most frequent number of partners ranges from 5 to 7, followed by 3 to 4 and, with a lower frequency, joint projects made up of 8 to 10 partners. In relation to the number of countries that participate in joint projects, the most frequent is 4 to 6.

Table 1. Distribution of replies by country

EU and EFTA Country	(%)
Austria	2
Belgium	2
Denmark	2
Finland	3
France	15
Germany	13
Greece	3
Ireland	3
Italy	11
Netherlands	3
Norway	2
Portugal	7
Spain	15
Sweden	3
Switzerland	1
U.K.	15

We pre-tested the survey instrument with a small group of ILO from different countries before sending out the final version. The final questionnaire was then sent to the whole set. The response rate to our questionnaire was 93.5 percent (189 valid surveys).

4.2 Measurement

We have used empirical precedents to develop these measures; we relied on extent literature and fieldwork to select individual items for our scales. Table 2 provides a synthesis of items used to measure each construct from a review of joint research projects, which analyse these issues.

Multi-item scales were used to collect data on most of the variables. Simplicity in scoring was sought by using a balanced 5-point Likert-type scale. Basically, each respondent was asked to indicate the extent to which he/she agreed with the

given statement or frequency, thus, 1 is strongly disagrees or low frequency and 5 is strongly agrees or high frequency. We pre-tested the survey with a small group of managers from different ILO's before sending out the final version. This helped us modify the suitability of the language used and reject items that were difficult to understand, or in order to avoid repetition.

In relation to independent variables, the first group refers to the structural mechanisms governing R&D networks and is explained from a transaction cost perspective. The first variable is the degree of structure depending upon the similarity of the network structural elements to the market or the firm. The mechanisms used are derived from the need to plan, decide and organize the activities to be developed (see Geringer 1991; Lorange and Roos 1991 or Bleeke and Ernst 1991). In relation to the planning and organization of network, diverse criteria are cited in the literature (Ouchi and Bolton 1988; Mytelka 1991; Fdez.de Arroyabe and Arranz 2002). The first is linked to the balance among partners, and in European transnational projects also includes the country factor, which seeks certain balance in the distribution of tasks. The second criterion considers the scientific and technological specialization of the partners. The last one refers to the special requirements of the project, mainly in sponsored projects. Regarding decision-making, the specific literature shows that two centres of decision making exist: the coordinator of network and the consensus between partners. The second group of independent variables is related to safeguard mechanisms, which govern R&D networks in order to avoid opportunistic behaviour (Ouchi and Bolton 1988; Tidd and Trewhella 1997; Williamson 2002). The specific literature on networks asserts that the selection of a partner, based on previous experiences and confidence serve as important factors to minimize opportunistic behaviour. Furthermore, the definition of responsibilities (both in the inputs and the sharing of benefits as well as in the definition of tasks) and the control mechanisms (reports and meetings among partners, the role of coordinator and so on) are frequently used as safeguard mechanisms (Geringen and Hebert 1989; Ring and Van de Ven 1994; Mohr and Spekman 1994).

As we have indicated in the literature review, the point of view of transaction cost is not the only factor that can explain the governance forms of networks. We will introduce a set of variables, following the approach from social capital, to help us understand the form of governance chosen in the network. From this approach, the variables used refer to the degree of cohesion in the interaction among partners and to the degree of openness of the network. As Rowley et al. (2000) indicate, to measure the degree of cohesion of a network, the intensity and density of contacts among the partners must be born in mind. Contractor and Lorange (1988) point out that the greater the intensity and density of contacts the greater the cohesion of the network. The degree of openness is determined by the frequency and the diversity of external contacts of the network. Thus, the greater the frequency and the diversity of contacts the more open the network is to the exterior. Following Roberts (1984) we can differentiate among external contacts with suppliers, clients and competitors, institutions, documental sources and so on.

Table 2. List of items used to measure each theoretical construct

Latent construct	Reference source
A.- Structural Mechanisms	
• R&D Planning Criteria 1. Technological and Scientific Knowledge 2. Equal Distribution to all partners and countries 3. "Ad hoc" decisions 4. Requirement of UE institutions	Ouchi and Bolton 1988 Geringer 1991 Lorange and Roos 1991 Bleeke and Ernst 1991 Mytelka 1991 Fdez. de Arroyabe and Arranz 2002
• Decision making Opinion in solving problems 1. The opinion of the coordinator 2. The opinion of the partners	
• Organisation of activities among partners 1. Each partner develops activities independently 2. Teams to develop activities	
B -Safeguards Mechanisms	
• Selection of partner 1. Previous experiences 2. Scientific and technological qualification 3. Requirements of EU programmes 4. Other	Ouchi and Bolton 1988 Geringen and Hebert 1989 Ring and Van de Ven 1994 Mohr and Spekman 1994 Tidd and Trewhella 1997 Williamson 2002
• Definition of responsibilities 1. Contribution of each partner 2. Allocate profits 3. Define tasks	
• Monitoring and control of R&D network 1. Partner reports 2. Informal communication 3. Meeting with partners 4. The project coordinator	
C.-Cohesion Degree	
1. Density of contacts 2. Intensity of contacts	Granovetter 1985 March 1991 Powell and Smith-Doerr 1994 Dyer and Nobeoka 2000 Rowley *et al.* (2000)
D.- Openness Degree	
1. Frequency of contacts 2. Customer 3. Supplier 4. Competitors 5. Research centres 6. Universities 7. Companies 8. Trade fairs 9. Conferences and workshops 10. Technical and scientific literature 11. Results of public programme 12. Legislation and standards 13. Professional organization	Roberts 1984 Nonaka and Takeuchi 1995 Peters and Becker 1998 Teece 1998 Hagedoorn *et al*. 2000

The dependent variables attempt to analyse the activities developed in the R&D network. Brockhoff (1992), Sakakibara (1995, 1997) and Trott (1998) classify technological activities in function of their applicability: from pre competitive or generic activities, such as basic research, to very applied activities designed to obtain commercial products –through an innovative process, for example– and developing activities intended to the transfer of technology. To determine this factor, we propose two key variables: the first related to the activities developed in the network and the second related to the kind of objectives pursued.

Table 3. Activities and objectives in function of their applicability

Applicability	Activities	Objectives
Higher ↓ Lower	▪ Product Development ▪ Applied Research ▪ Pre-commercial applied research ▪ Basic Research	▪ New Products ▪ Patents ▪ Training ▪ Resources and research databases ▪ Scientific publications

5 Results

In the first stage, we homogenized and simplified the variables with the aim of obtaining constructs or factors that represent the governance form of the network. In the second stage, we will apply the causal model, relating the factors that define the governance form to the applicability degree of the technology managed in the network. Both refer to the activity developed and to the objectives pursued. Table 4 shows the group of different variables that were obtained through a factor analysis.

To assess reliability we computed Cronbach alphas (α) for each multiple scale item and found this to be well above the cut-of value of 0.7 in each case (Nunnally 1978). Table 5 provides the correlation matrix of the key variables (Bagozzi and Yi 1988). We obtain satisfactory results for validity and reliability of factors. Thus, we can accept the validity of factors.

Causal Analysis

To examine the relationships among the applicability of technologies developed in a network and the forms of governance, we constructed an OLS regression model.

The OSL regression model (Table 6 and 7) examines the influence that factors of governance (structural mechanisms, safeguard mechanisms, cohesion and openness degree) have both on technological activities and on the objectives of projects.

Table 4. Descriptive statistics of governance forms

Latent construct	Description value	Factorial Analysis	Reliability Analysis
	Mean	Weight	α
A.- Structural Mechanisms			0.813
• R&D Planning Criteria			
1. Technological and Scientific Knowledge	2.5	.756	
2. Equal Distribution partners and countries	3.6	.837	
3. "Ad hoc" decisions	2.1	.644	
4. Requirement of UE institutions	3.0	.785	
• Decision making Opinion in solving problems			
1. The opinion of the coordinator	3.7	.811	
2. The opinion of the partners	4.1	.823	
• Organisation of activities among partners			
1. Each partner independently	3.4	.530	
2. Teams to develop activities	2.5	.372	
B -Safeguards Mechanisms			0.732
• Selection of partner			
1. Previous experiences	4.0	.794	
2. Scientific and technological qualification	3.3	.422	
3. Requirements of EU programmes	3.7	.617	
• Definition of responsibilities			
1. Contribution of each partner	3.9	.811	
2. Allocate profits	3.8	.809	
3. Define tasks	3.3	.790	
• Monitoring and control of R&D network			
1. Partner reports	2.7	.450	
2. Informal communication	3.3	.547	
3. Meeting with partners	4.1	.765	
4. The project coordinator	3.2	.201	
C.-Cohesion Degree			0.741
1. Density of contacts	3.2	.798	
2. Intensity of contacts	4.3	.840	
D.- Openness Degree			0.680
1. Frequency of contacts	2.0	.673	
2. Customer	2.2	.477	
3. Supplier	3.5	.545	
4. Competitors	1.6	.273	
5. Research centres	2.7	.331	
6. Universities	2.9	.460	
7. Companies	2.8	.495	
8. Trade fairs	2.9	.584	
9. Conferences and workshops	1.3	.380	
10. Technical and scientific literature	2.0	.510	
11. Results of public programme	1.8	.335	
12. Legislation and standards	1.4	.297	
13. Professional organization	1.2	.253	

Table 5. Correlation matrix between factors

	Structure	Safeguard	Cohesion	Openness
Structure	1.000	0.189	0.197	0.053
Safeguard		1.000	0.064	0.017
Cohesion			1.000	0.058
Openness				1.000

Table 6. Technological activities of the network (OLS regression model)

Variable	Beta coefficient			
	Basic Research	Pre-commercial	Applied Research	Product dvelop.
(Constant)	.056	-.042	.112	.099
Structure	-.034	.053	.374	.510
Safeguard	-.116	-.048	.271	.358
Cohesion	.003	.022	.311	.490
Openness	.435	.489	.032	.045
R^2 (adjusted)	.415	.510	.691	.580

Table 7. Objectives of network (OLS regression model)

Variable	Beta coefficient			
	Basic Research	Pre-commercial	Applied Research	Product dvelop.
(Constant)	.024	-.005	.198	-.013
Structure	.332	.107	.523	-.053
Safeguard	.210	.065	.302	-.242
Cohesion	.454	.078	.609	.097
Openness	.087	.173	.076	.007
R^2 (adjusted)	.506	.652	.540	.243

6 Discussion

The results corroborate that the structural factor has a large impact on product development (.510) and applied research (.374) in the R&D network. Furthermore, the structural factor is significant when the objective of the network is the development of new products (.523). Regarding the evolution of the safeguard mechanism factor, we must point out that the structural factor has greater weight in the case of applied research (.271) as well as in product development (.358). As regards the objectives of the network, these mechanisms gain relevance if the goal is

to develop new products (.302) and in the case of obtaining patents (.210). In our model, the cohesion and openness factors have been introduced in order to analyse both the density and intensity of contacts, the frequency and the kind of external contacts. Hence, it can be affirmed that openness factors are more important in the case of basic research (.435) and pre-commercial applied research (.489) as well as when the objectives are training (.173) and scientific publications (.133). The cohesion factor is more important in technological activities directed to product development (.490) and applied research (.311) as well as when the objectives are to achieve new products (.609) and patents (.454).

All these results have allowed us to contrast the hypotheses stated in this study and to confirm them positively. The first hypothesis or link between applicability and safeguard mechanisms is confirmed as much in the kind of activities as in the objectives of the network. Applied research and product development are activities with high a high degree of applicability. Their evolvement through R&D networks can lead to opportunistic behaviours of the agents. From the viewpoint of objectives, safeguard mechanisms are established because new products and patents have immediate applicability. In the case of activities with low applicability −such as basic research or pre-commercial applied research− and in the case of objectives related with the diffusion of knowledge −such as training, scientific publications and research databases− no direct relationship has been found.

Moreover, the structural factor is significant again both in the case of activities with high applicability (product development and applied research) and in the case in which the objectives of the network can be implemented immediately, such as new products or patents. Therefore, regarding hypothesis 2, results allow us to accept the relationship between the applicability of technology and the degree of structural mechanisms in the network. If focusing on the activities with low applicability –such as basic research– and on less applied objectives -such as generating scientific publications or resources and data base- the structure mechanisms do not seem to be important. These findings are consistent with transaction cost theory in which greater applicability tends to create contractual structures (Williamson 2002), designed to manage the technology in the network. On the contrary, when the applicability of technology is lesser the structure is less important.

Our findings show that in the case of technological activities developed in the network, the cohesion factor is very important regarding pre-commercial applied research, applied research and when the activity undertaken is product development. Likewise, we can observe that cohesion has minor importance in the case of basic research. On the other hand, when analyse the network objectives, we found that cohesion inside the network is important when the purpose is to develop new products or to obtain patents or licenses. Therefore, the cohesion factor is important in more applied activities and objectives, in which exploiting information is a key question. Hence, we can confirm hypothesis 3 that applicability has a positive influence on the cohesion of a network.

External openness factors are important when the activities developed in the network refer to basic research. As for the objectives of network, external sources

are shown to be more relevant both in scientific publications and research databases and in the case of training. Therefore, network openness has great importance when applicability is lesser, that is, when the aim of R&D network is to spread knowledge or is designed to gather information. Hence, as regards hypothesis 4, we find a relationship between the degree of applicability and the degree of openness of the network.

Our results confirm that the applicability of technology has an influence both on administrative structures as well as on the openness and cohesion of R&D networks. We show that two kinds of networks exist. The first category of networks which have the objective of developing more applied activities or, as March (1991) points out, carrying out exploitation activities which lead to a competitive improvement of products or services. In this first category, governance form is based on a higher cohesion characterized by high density and intensity of contacts among the partners of network and a structural framework designed to execute its activity. Thus, this first category uses mechanisms of planning and organization in its governance form and the decision-making is carried out by the consensus between the coordinator and the partners. Furthermore, this type of network adopts a series of safeguard mechanisms mainly based on the selection of partners, the definition of responsibilities, monitoring and control mechanisms. In addition, the opening degree and external contacts are minimal.

The second category are networks designed to develop lesser-applied activities, or in March's terminology, to perform exploration activities. Their governance form is characterized by the low importance of administrative factors and safeguard mechanisms and the primary goal is capturing information (March 1991; Rowley et al. 2000). To undertake these activities of exploration, external contacts and a higher openness degree are important, while the cohesion factor –in terms of density and intensity of contacts– has low significance.

7 Conclusions

Given the limited number of studies that provide empirical evidence regarding governance structures in R&D networks, the purpose of this paper is to add this body of literature. We characterize the forms of governance in terms of the applicability of the technology managed in the networks. To do so, a set of factors were selected and grouped into two categories. Structural or administrative factors selected, basic for the analysis of governance forms, have been planning criteria, decision-making and organization of activities. The social factors chosen were cohesion and openness degree of network. Next, they were tested in a sample of European R&D networks where firms and research organizations were involved during the period 1990 – 1999. In summary, this study contributes to the understanding of governance structures in R&D networks.

Unlike previous studies, where research has been limited to the analysis of governance structures from a single approach, our study analyses the forms of govern-

ance from the two main approaches that explain the dynamics and implications of network management. The results lead us to observe that the applicability of R&D developed in the network is the factor that determines its governance form. These results constitute an empirical contribution to the study of the management of R&D networks. Moreover, we have obtained a series of conclusions and implications that can be valuable to the academic world and the management of R&D networks. First, we have elaborated and tested a theoretical model that identifies the determining factors of governance structures in R&D networks. Factor grouping into two categories (administrative and social) makes a novel contribution to the study of the governance of R&D networks as it provides a way to integrate previous studies. In this sense, we find that our model allows to overcome the heterogeneity of more specialized studies. Second, we have collected data from research organizations that operate in the context of Framework Programs fostered by the European Union. Results reveal the importance that technological objectives pursued and technological activities developed have on the performance of the network. We highlighted the am administrative aspect and the cohesion and openness degree among partners. These aspects give us a more comprehensive and detailed perspective of this kind of networks and can be considered an original and relevant contribution due to the lack of precedents and the importance of technological cooperation for the development of European Science and Technology Policy.

To conclude, this study represents a starting point for future research in order to widen theoretical and empirical evidence about the performance of R&D networks. As a research agenda, we suggest an in-depth analysis of the factors identified for governance structures, as well as the identification of new factors that might, in some way, have an influence on governance forms. Furthermore, we believe that the consideration of particular projects as a unit of analysis might offer results more specific about each kind of network. In this sense, it would be of interest to analyse governance structures in which partners are featured differently (firm-firm, customer-supplier, and so on) comparing administrative and social factors with those applied in sponsored networks. Finally, generalizing the results requires contrasting our findings with other samples of technological international networks because of the increasing relevance of this kind of cooperation for the development of countries and with the aim of capturing the richness of network governance choices.

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Firm and Industrial Organization Frontiers: An Empirical Model of Inter-firm Network in the Winter Sports Industry

Rachel Bocquet[1]

Abstract. This paper explores a model of inter-firm network in the case of the winter sports industry. It discusses the problem of skiing resort frontiers and the nature of the inter-firms arrangements to produce the final product i.e. spending holidays in a mountain resort. Two network archetypes are defined. They ensue from two approaches in economics: the Transaction Cost Economics and the French Theory of Conventions. In conclusion, we show that these two networks are complementary. Thus, skiing resorts can no longer be seen as autonomous organizations with spatial boundaries. Their frontiers are extended to the contractual or conventional arrangements which characterize the new winter sports industrial organization.

Keywords. Inter-firm network, industrial organization, winter sports industry

1 Introduction

The objective of this paper is to build a model of inter-firm network in the case of the winter sports industry. More precisely, we discuss the problem of skiing resort frontiers and the nature of the inter-firms arrangements to produce the final product i.e. spending holidays in a mountain resort in a restructuring context. We try to explore a certain paradox in economic research applied to the winter sports industry.

On the one hand, the models dedicated to the analysis of industrial structures consider the skiing resort as a simple "technical or technological" stage of the global added value chain. Serious well-known criticisms can be addressed to these models: organizational dynamic between firms is ignored, the vertical dimension of arrangements is overestimated (De Bandt 1989), and frontiers of industries are designed with institutional conventions which are not consistent with firms' core

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activities (Valla 1982). On the other hand, researchers in the field of local development discuss the question of the nature of "internal" frontiers of the skiing resort focusing on the exclusive impact of spatial or non economic dimensions (Rallet 1993). Skiing resorts are not placed in their strategic environment, which can impact their final performance.

We attempt to reconcile these two viewpoints showing that relevant frontiers of skiing resort must be defined in an extended way, not limited to structural determinants or spatial proximities. Thus, we explore a network model to capture the skiing resort as an organizational form extended to a cluster of independent firms, vertically linked, which contribute to the same final product. Our construction mobilizes two theoretical conceptions of inter-firm network. The first one is the transaction costs tradition, which considers the network as a hybrid form without a proper existence. The second one is the French theory of conventions yielding another vision of inter-firm network as a collective and non-contractual governance structure. With these two conceptions, we construct two business network archetypes.

The empirical methodology is qualitative and based on interviews with 10 top managers of winter sports industry firms (from all levels of the added value chain of the final product). The first objective is to confront empirically the two business network archetypes. A first series of variables captures the nature of networks in the winter sports industry. A second series of variables describes the structure of business networks through five central dimensions (formalization, density, intensity, centrality and stability). A second objective is to test the complementarity or the substitutability of the identified networks.

In conclusion, the main issue under discussion is the nature of skiing resorts and business networks frontiers. Can we continue to consider skiing resorts as autonomous organizations with spatial boundaries or can we extend skiing resorts frontiers to contractual or conventional dimensions?

2 The Winter Sports Industry: Structure and Organizational Dynamics

The objective here is to describe the winter sports industry and its evolutions over the last ten years. It stresses new economic processes like industrial concentration, networking and power reversals in the added value chains (2.1). It results in the emergence of a new industrial organization shaped by inter-firm networks. This puts forward the question of the relevance of the theoretical frameworks in use up to now (2.2).

2.1 The Two Value Chains of the Winter Sports Industry

The production of the final product (spending holidays in mountain resorts) requires a specific organization to match with two types of consumption. One is dedicated to the set of skiing equipment (textiles, shoes, skis or other tools, acces-

sories…). The other concerns the practices in mountain resorts. The winter sports industry is in fact organized along two value chains. The first focuses on the production of sport good outfits. The other produces a system of services that is less or more capitalistic[2] to fulfil the needs of the tourist during his stay in the skiing resort.

Figure 1 gives us a global representation of the production of the final product. We make a distinction between the agents which are outside the mountain resorts (suppliers and retailers) and the local agents embedded in mountain resorts territories (including ski lift companies and lodging producers).

These two value chains are undergoing major changes through the impact of new constraints such as Information Technology (IT) diffusion, the evolution of consumers' needs, new competitive pressures, the globalization of markets. "It is

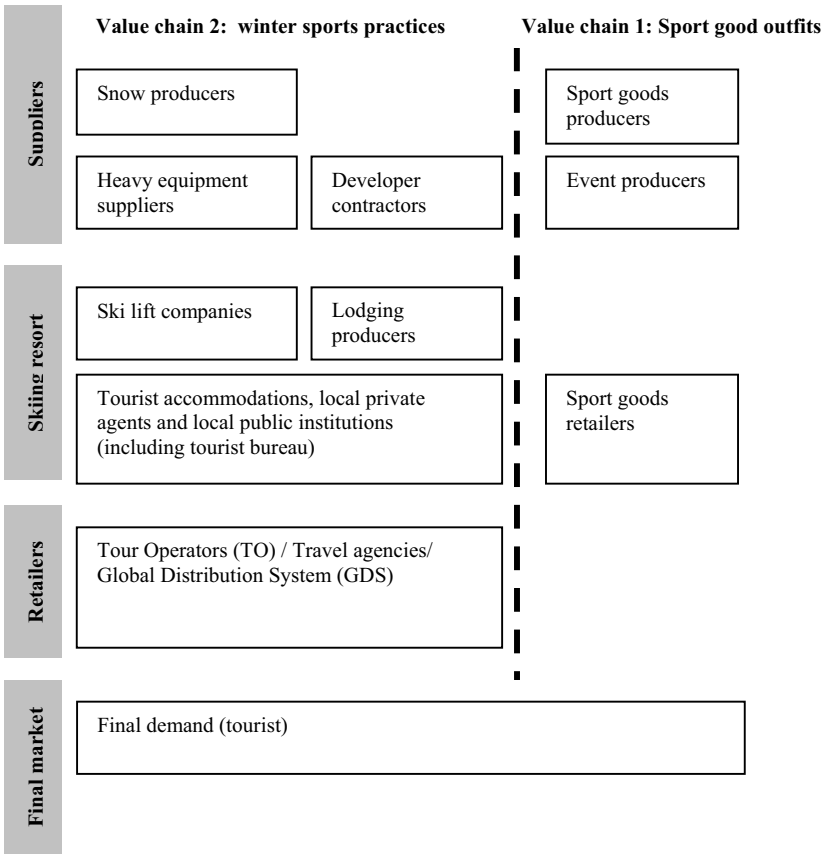


Fig.1. The industrial organization of the production of skiing holidays

[2] It depends on the governance structure of the skiing resorts. Some resorts are owned by private firms, others by public institutions.

undeniably true that a comparison can be drawn between this industry and the food industry ten years ago"[3] . This shows how the new industrial dynamics make a break with the previous path. Three main elements can explain such an evolution. First, it would be pointless to deny the impact of the new production model based on competencies to face consumer requirements. Second, the uncertainty and the cognitive complexity of the external environment lead to new patterns of coordination between firms to guarantee a better reactivity and flexibility. Finally, the pressure of shareholders compels firms to rationalize and focus on their core competencies (outsourcing non valuable activities). It results in new firms' strategies valorising internal capabilities and taking advantage of synergy effects with external partners in order to create global answers for consumers.

2.1.1 The Value Chain 1: Sport Good Outfits

The intensification of the concentration process is a typical characteristic of this value chain. Seasonality is a true constraint and reinforces this process. The downstream side was the first concerned with this phenomenon in response to market demands. Consumers become actors. They are more autonomous, more responsible but also more capricious, looking for a fully dedicated offer. These new requirements are supported by the acceleration of the IT diffusion which guarantees easily accessible and less anonymous choice solutions[4]. Retailers take advantage of this new trend extending their offer to new products and services (packages). To achieve this, most retailers have engaged long-term relations with external partners to assume complementary investments or proceeded in fusions and mergers operations. These strategies reduce information asymmetries for consumers.

In response to this concentration process, the upstream producers engaged similar strategies. They centred upon propriety and designed new firm frontiers. To take an example: just consider, by way of illustration, the recent mergers of Rossignol by Quickquilver or Salomon by Amer. This shows us the firms' strategic intent to gain winter markets and internalize core competencies to cope with unstable and innovative markets. These operations of external growth also illustrate the firms' ambition to set out to conquer a lost monopoly market power.[5] Reaching a "rank optimum", relations between producers and retailers seem to be on equal terms in a context of "coopetition". But, in reality, there is no evidence to support this fact. Some producers declare: "they're holding a gun to my head"[6]. They do not have solutions to « negotiate » with powerful retailers. Other producers disagree with this opinion and declare they have a real autonomy and relations based on equal terms with retailers. It is not surprising if we consider their ability to create their own franchise network such as Salomon, Rip'Curl, Oxbow.

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[3] According to a top manager of a large sport goods retail company.

[4] For more details about the impact of Internet upon tourism markets, see Longhi (2004).

[5] The sport goods producers suffer from a stiff competition of large retail companies which develop their own brand.

[6] According to a sport goods producer.

2.1.2 The Value Chain 2: Winter Sports Practices

The value chain 2 undergoes the same kind of changes with the IT impact and the evolution of consumption standards. The Tour Operators saw the business opportunities and have developed on line all inclusive offers. This product innovation has contributed to the emergence of new partnerships between agents of the value chain. The most striking examples of cooperation are the ones between Tour Operators and ski lift companies on the one hand, and between Tour Operators and sport goods retailers on the other hand. Some retailers blame firms for doing this. For instance, a top manager of the largest French retailing company declares:"Our major competitor sells 50 euros to Tour Operators instead of 100 euros to the consumer. We prefer to sell 80 euros to the final consumer and stay independent"[7]. In his view, the presence of Tour Operators as central agents in the whole system regulation produces a destructive competition and domination effect.

By opposition, firms agree with the fact they have more action of freedom in the business to consumer segment (B2C) Indeed, when they can sell directly, the system is not the same. What is important at that level is to improve the global attractiveness of the skiing resort. Despite the high degree of rivalry between skiing resorts and the pressure of substitutes, most of the time, the actors play a cooperative game. Some relations of cooperation (more or less formalized) can be concluded to create new productive solutions and valorise the final products. The partnerships dedicated to the production of events in skiing resorts are good examples. These relations engage firms embedded in a same territory as well as external firms. Let us consider, for instance, the arrangement between a snow-grooming machine producer and a famous brand of street and surf wear to organize "free style" exhibitions in mountain resorts. The long-term contractual arrangement between the world leader of ski outfits and a car maker to create their own world tour is another example. These formal or tacit agreements can require a large scope of actors (private firms but also local or professional institutions). Multilateral relations between firms and institutions are set up to pursue a common objective. They share a common interest: to improve the image and the reputation of products brands and territories labels.

2.2 Industrial Concentration and New Patterns of Cooperation in the Winter Sports Industry

From all this, two evolutions characterize the changes in the winter sports industry. The first one is the intensification of the concentration process at all stages of the global added value chain. The consequence is more competition at each stage[8].

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[7] This strategy is possible because the retailer adopted a e-commerce network (via a market place).

[8] For instance, the brand manager of a famous sport goods producer says that "the market is very competitive. Barriers to entry, especially technological ones are very low. There are more and more products on the market. The competitive advantage is only based on marketing competencies".

The second one is the emergence of new patterns of cooperation between the actors of the two value chains (at different stages) which result in the creation of new business (e.g. events), products and services (e.g. packages). This reconfiguration means a new industrial organization which contributes to reduce costs and information asymmetries under reinforced competitive pressure. At the same time, this industrial organization contributes to improve firms' competencies and their ability to innovate. It is clear that the whole industrial dynamic acts on firms and industrial organization frontiers.

The empirical literature mobilizes two theoretical traditions to describe the productive system. On the one hand, the approach in terms of value chain is able to describe the structure of the production process and sometimes its dynamics when in the case of well identified activities (as regards accounting). On the other hand, the approach in terms of local governance focuses on spatial dynamics of the local system. Even if there is a fundamental difference between these two approaches because they do not deal with the same object, they ask the same question: What are the key-success factors of a (local or industrial) tourism system? We can conclude that researches dedicated to the local tourism system set the value chain as "an endogenous mechanism able to produce a self development process" (Morvan 1991, 258).

3 The Winter Sports Industry: Between Deterministic Conditions and Territorial Dynamics

In this section, we examine if the two theoretical traditions mentioned above are relevant to capture the new industrial organization. The value chain model is interesting because it looks at the industrial organization but fails to convey its dynamics (3.1). By opposition, the local governance model is able to describe the inter-firm relations and their evolution but confines the productive system to territorial proximities (3.2). We show how the concept of network is useful to have a proper look at the coordination between firms and how networking shapes the industry (3.3).

3.1 The Winter Sports Industry as Value Chain Model: Pros and Cons

The value chain model is unable to explain the evolutions just described above. Theoretically, the value chain is seen as an organizational sequence which, starting from raw materials, adds value through different stages of transformation, transport, storage, availability to end in the final output. This techno-economic viewpoint is largely used in empirical studies applied to tourism systems. The industrial organization is reduced to a simple summation of activities, which results itself in an aggregation of firms producing the same output. It describes statically

the way the final market influences the production processes. More precisely, the structure of the value chain is determined by three key dimensions: the nature of the market, the nature of the final product and the nature of the technology. In dynamics, its evolution is a function of some element or other of these key dimensions which in turn will affect the whole system.

This deterministic vision is largely criticized because it cannot explain the tourism business reality. A first critic deals with the frontiers of the observed system: "Things are never so simple" (Morvan 1991, 251). Flows can concern different businesses, a diversity of technologies and know-how. This raises the problem of the definition of the value chain. In fact, this definition depends on the availability of data which describes the production system in a public finance. This does not correspond to the significant activities of firms (Valla 1982). Most often, this accounting definition locks in firms into unrealistic activities and ignores inter-firms relations outside the initial perimeter. In empirical studies, this definition defies credibility because it separates the two value chains which should be, on the contrary, highly connected. However, this is only one part of the criticism; added to this the inter-firm relations are only seen vertically and chronologically. Horizontal flows are ignored (De Bandt 1989). Moreover, inter-firm relations are seen as buying and selling transactions. No attention is given to specific arrangements which do play an important role in the dynamics of the tourism system. Finally, the organizational density is ignored. Firms are seen as black boxes, as places of technical operations whose main objective is to transform input into output. Nothing is said about how it is produced in the added value chain. Actually, these operations need a set of more or less hierarchical organizations. They require specific procedures and routines, different governance structures such as markets, institutions, firms and cooperation. They also need an information system to coordinate the whole system and valorise each semi product with market or transfer prices to produce the final output. The coordination of activities is an essential question. To tackle this point, we must overcome this deterministic vision which ignores the organizational dimension of coordination. It is more accurate to adopt a conception in terms of industrial organization. This suggests that the study of inter-firm relations is more important than the study of micro-economic agents themselves, interacting in a given market structure. The relations that firms build together become the main issue.

3.2 The Skiing Resort as a Governance Model: Pros and Cons

After studying the deterministic vision of the value chain model, let us consider now another meso-economic approach that cannot be neglected here because of its importance in the field of tourism. We refer to the local governance model stemming from localized industrial system models. In these approaches, the territory is seen as an actor. The final product is no longer the link between firms; it is the local dimension that becomes the nexus of integrated actions. Then, it is important

to observe the quality of coordination between actors embedded in a same territory. This representation emphasizes the collective dimension of coordination.

The local governance viewpoint considers the economic system as a spatial one. Applied to the winter sports industry, it is the mountain resort as the final sphere of valorisation of the product which is observed. The mountain resort is a localized system in which private and public agents can interact (Beccatini 1992; Courlet and Pequeur 1992). According to this conception, the productive organization regulates the system. The production requires non-market coordination mechanisms such as trust, reciprocity, power, social conventions (Storper and Harisson 1992; Storper and Walker 1989). Hence, this concept of the governance supposes intermediary modes of regulation between institutional mechanisms and market rules, which reconciles private and public interests, economic and social aspects (Benko and Liepietz 1992). The empirical studies look at the skiing resort as a set of four central dimensions: a place where (1) private and public actors can interfere, (2) intentions and coordination of embedded actors are central, (3) the patterns of coordination are complex (ie. vertical as well as horizontal coordination, formal and informal agreements, cognitive learning process and power), (4) a place which has a collective identity.

From all this, it follows that the competitive advantage of the localized system is based on the quality of its embedded coordination. In that sense, it is richer than the technico-economic approach seen above. First, horizontal inter-firm relations are explicitly taken into account. Second, we are able to discuss the nature of inter-firm relations as well as their mechanism of regulation. Finally, it tackles the problem of coordination between public and private actors. Nevertheless, serious limits originate from the overestimation of the spatial determinants in the whole economic dynamics. It is the icon of the territory as an actor which is the building block of a general model of coordination rather than as special kind of network. Yet, competitive advantage and innovation process do not come only from territorial patterns of coordination. There are other well-known efficient means of coordination such as organizational network, cooperation, trust …which are not necessarily embedded.

To sum up, the local approach improves the industrial conception because it considers the value chain through an endogenous mechanism which builds its competitive advantage. Yet, the spatial proximities are largely overestimated and we cannot consider the territorial network of actors as an independent organization. It is most important not to reduce the industrial reality into an ad hoc representation with fixed spatial boundaries.

Although the discussion about these two approaches is still open (see Table 1), we can accept that both of them do not explain the frontiers between the firms and their industrial organization. These frontiers are confined to given deterministic conditions. An alternative may be to develop an industrial organization approach (Richardson 1972; Ravix 1990). The tourism system can be seen as a set of activities which need to be coordinated according to different patterns. At each step, the question of the choice of the coordination arises. The answer is different depending

on the time, the place, and the stage of production. There are no given structures. Therefore it is important to have a new theoretical framework to explain inter-firms coordination modes without pinpointing at first any coordination mechanisms. It is quite certain that the network concept can be the building block of this alternative paradigm.

Table 1. Value chain model versus local governance model

	Value chain model	**Local governance model**
Main issue	Product focus	Spatial focus
Unit of analysis	Transaction	Rules
Coordination mechanisms	Transfer and market prices	Any kind of mechanism, especially non market mechanism
Industrial organization frontiers	Confined to the product/market/technology constraints	Confined to the territory
Nature of the industrial organization	Firm aggregation in a given market structure	Collective body in a given territory
Main limits	Organizational dimension of coordination is ignored	Organizational dimension of coordination is limited to spatial area.

3.3 The Inter-firm Network: Towards a New Industrial Organization Conception?

The concept of network is particularly adapted to the winter sports industry. The final output is the collective result of complex patterns of market or non market relations between a large number of actors. These relations are far beyond spatial or accounting representations. The concept of network stresses the importance of coordination between firms rather than firms themselves. In the theory of the firm, it suggests "to leave aside the image of the autonomous firm confronted with its environment for the image of a firm connected with its environment" (Bouvier-Patron 1993, 8). Nevertheless, this move from intra towards inter-organization does not produce a unified framework. Obviously, there is a sharp split between the transactional approach and the approach in terms of industrial organization. The transactional cost economics considers these « grey areas » as a simple continuum between market and hierarchy (Coase 1937, 1987; Williamson 1992). On the opposite, the French theory of conventions sees in these « grey areas » specific governance structures (Richardson 1972; Simon 1957; Favereau 1989b).

In the theoretical literature, the network concept is a fuzzy and ambiguous one. On the one hand, the transactional approach extends the coordination phe-

nomenon to internal organization while holding tight the optimization hypothesis. It results in a radical change of the unit of analysis: "the transaction rather than the firm or the market" (Williamson and Ouchi 1983, 1). This move permits the analysis of intermediate forms of coordination. The inter-firm network is not a distinctive form compared to market or hierarchy. It is a hybrid arrangement whose main object is efficiency (cost minimization). The main issue is to give autonomy to the theory of the firm recognizing an alternative to the firm/market dichotomy.

On the other hand, the industrial organization approach builds up a real theory of inter-firms relations (Ravix 1990). It overcomes the limits of transactional cost economics: the hybrid forms becoming specific objects of study where we can clearly find relations of coopetition. This conception necessitates a hypothesis of complex rationality: the procedural rationality[9] (Simon 1957, 1959) while asserting the reference to internal coordination.

These two concepts of network highlight a wide gap on epistemological, methodological and theoretical grounds. We aim here to confront these two conceptions with the winter sports industry in order to describe the real nature of coordination and the structure of business networks. In this way, we evaluate the significance of the two theories (a priori rivals) within a unified framework. Therefore, we consider the network as "a plain tool able to analyze the emergence and the dynamics of basic institutional forms in the economy, from partnerships more or less explicit to market structures" (Cohendet et al. 2003, 17).

4 The Inter-firm Network Model: Between Transactions and Conventions

We will conduct a theoretical survey on Transaction Cost Economics (4.1) and the French Theory of Conventions (4.2) to answer the following question: "what is the nature of an inter-firm network?" This survey aims to elaborate a grid reference to capture two archetypes of networks which ensue from these theories (4.3).

4.1 Transaction Cost Economics: The Continuum Thesis

The methodological posture of Transaction Cost Economics is of a strict individualism (e.g. complete rationality and imperfect information). That is why, hybrid forms are not distinctive objects compared to market or hierarchy. This is the continuum thesis (Baudry 2004).

Williamson sees the network as a hybrid organizational form consistent with specific assets. It is an efficient governance structure because it maintains market

[9] This concept is the generic one. It has been keenly studied and qualified (e.g., situated rationality, interpretative rationality).

incentives while bureaucratic distortions are avoided (cost minimization). The inter-firm network is considered as a trade system able to plan or react like an integrated firm whose internal efficacy could be compared to market mechanisms (Williamson 1985). For the author, the market and the hybrid form are two alternative modes of governance. The choice does not depend on the nature of attributes but on their degree. As a matter of fact, the network is not a proper object. From the introduction of the hybrid firm, it follows that the initial dichotomy between firm (labour relation) and market (trade relation) becomes fuzzy. There would be only contractual arrangements (firm, market and network) in competition. In this continuum thesis, the concept of network is defined by default: no market, nor hierarchy. Williamson does recognize that the network is an unstable form per se and will move towards hierarchy or market according to the level of transaction specificity.

In this tradition, the network is a strict cooperative game. The players who have concluded contractual and explicit arrangements are part of the network. These cooperative contracts are made to constrain the parties to respect the commitment taken ex ante. Yet, these contracts are still incomplete contracts and they are not efficient tools to protect against opportunistic behaviour. In the case of significant specific assets, their internalization can only lessen that kind of risk (propriety of assets). There appears to be "an overestimation of positive effects ensuing from propriety and an underestimation of positive effects ensuing from contracts taken outside the hierarchy" (Baudry 2004, 263).

According to that conception, the network has no organizational density. Each contract is studied separately. The collective dimension is erased by a series of contractual arrangements between individual firms endowed with unbounded rationality. There is no explicit hierarchy between the co-contractors, or any kind of power. If power can exist in the model, it is confined inside the firm via the propriety of specific assets.

Many researchers have criticized this continuum thesis. They put forward another conception we will name «the integrated organization" (Fréry 1997; Rajan, Zingales 2001a). In their sense, the inter-firm network must show "an explicit hierarchy along with its supervision apparatus, subordination levels between firms and a central mode of regulation for strategic orientation" (Fréry 1997, 39). The basis of integration is no longer the propriety of assets. Fréry states that three modes of integration give power to a central firm over the other partners of the network: (1) media integration coming from brand power that ensures partner loyalty, (2) logistic integration built on Information Technologies to control partners remotely, (3) cultural integration based on reciprocity and social conventions to cement non market relations between partners.

Thus, Fréry shows that firm frontiers are not always designed by propriety rights. In many situations, other "critical resources" (Rajan, Zingales 2001a) extend these firm frontiers to those of the network.

4.2 The French Theory of Convention: The Specificity Thesis

Based on a hypothesis of complex rationality, the French Theory of Conventions differs from the Transaction Cost Economics. This hypothesis introduces two kinds of uncertainty: (1) an external uncertainty because firms do not know the entire list of the possible outcomes and do not anticipate the consequences of their action; (2) an internal uncertainty which hinders firms from obtaining an optimal result. This duality implies to look differently at inter-firm coordination. As a matter of fact, the contract is no longer sufficient in itself because all contracts are incomplete. We need other kinds of rules or conventions. These new rules are not intentional (as the contracts are), nor completely unintentional (as the constraints are). Firms create these rules by interacting but they do not hold these created rules. These rules become a frame of constraints outside the firm. The stabilisation of these rules is possible because firms have forgotten the mere reason why they have created these conventions.

The importance of rules to coordinate firms' behaviour results in the inversion of the role of the market: as long as contracts are incomplete, effective inter-firm relations are based on social forms that are outside the market. These social forms are collective knowledge crystallized in specific rules (no contracts, nor constraints) (Favereau 1989b). According to Favereau, it is possible to describe situations where an organization has to learn if we build a proper theory of rules and define the organization as an internal market.

Favereau defines rules as collective mechanisms (conventions) which capture the knowledge and permits firms to solve problems with the sole necessary and sufficient condition: to master the rules' vademecum: firms have to know "how to do things?" and are dispensed from knowing "Why to do things?"

Organization and market are opened to each other. Eymard-Duvernay (1986) illustrates this aspect showing the importance of product in the interaction between these two areas. As soon as the hypothesis of product homogeneity is dropped, quality is no longer an objective reality. On the contrary, it becomes a specific construction because "the transaction can be on a service, and be done by personal relationships without explicit media like rules or tools" (Eymard-Duvernay 1986, 240). Some tools, some forms, ensuring product qualification are necessary to regulate the relations between seller and buyer. Thus, firms create conventions of quality to obtain the expected result. This qualification is based upon a variety of management criteria according to the nature of the product. In other words, there is no one best way to manage the inter-firm coordination problem. Basically, the inter-firm network is a very adapted form to manage with uncertainty: firms share a common vision of problems and solutions. "The achievement of the product and the profitability of firms are at the same time the motive to cooperate and the hazardous outcome depending on complex coordination patterns" (Ughetto 2000, 64).

In the French Theory of Conventions, the firm acts in the production sphere rather than in the transaction one. The objective is to pass the test of selling the final collective product. This success rests on specific investments in rules which

Table 2. The two theoretical conceptions of inter-firm network

Dimensions	Transaction Cost Economics	The French Theory of Conventions
Objective of inter-firm network	Efficiency (transaction sphere): To reduce the transaction and production costs, to manage information asymmetries (informational coordination)	Learning process (production sphere): To create new competencies, new solutions in a context of radical uncertainty, quality oriented coordination (cognitive coordination)
Nature of inter-firm network	Hybrid form between market and hierarchy (no self identity)	Collective and autonomous governance structure (self identity)
Regulation mechanism	Formal contracts between firms (cooperation)	Conventions between firms (cooperation and/or competition)
Structure of inter-firm network	Network of bilateral contractual arrangements	Network of multilateral conventional arrangements
Production and coordination	Dichotomy	Interdependence

guarantee the coordination between firms. The firm is no longer seen as a mere function of production which only combines production factors and contractual arrangements. The firm must develop a collective learning process based on complex interactions with other firms. This learning process is essential for creating stabilized rules to attain the objective. What is at stake here is the firms' capabilities to manage the collective coordination. The success on the market relies basically on the quality of this coordination (Eymard-Duvernay 1986).

Hence, the networking of firms depends on the resources complementarity and no longer upon transaction attributes. The inter-firm network is firstly, a place of coordination between heterogeneous actors and secondly, a place of on-going learning process to create new collective competencies. The collective body is not given but constructed by rules. These rules can be elaborated by different means such as resources, experience... (Granovetter 1985; Favereau et al. 2003). Table 2 sums up these two clear cut conceptions of inter-firm network.

4.3 Empirical Model: The Two Archetypes of Inter-firm Network

These theories lead to two distinct representations of inter-firm networks according to their objective and structure. Five central dimensions are used to establish their differences.

A first dimension is how inter-firm networks are regulated. In Transaction Costs economics, networks regulate internal relations between their members through explicit agreements (formal contracts) that define rights and obligations between specific parties. By opposition, the conventionalist tradition considers

other mechanisms such as conventions and ties embedded in deeper social relations between members.

A second dimension concerns the number and complexity of relations that are considered in the network. The focus of analysis may range from relations between a small number of members as is found in Transaction Cost Economics (bilateral dimension), to complex patterns of relations creating a collective body (Economics of Conventions)

A third dimension is how important the network is to its members. In Transaction Costs Economics, firms may have committed substantial resources to the network they cannot really use for alternative purposes (significant specificity). According to conventionalist model, firms cannot survive alone in a context of radical uncertainty. Moreover, the final product may require some resources controlled by other firms (complementarity).

A fourth dimension is about the way power is distributed through the network. In Transaction Cost Economics, this notion is absent. There is no relation of subordination between the parties. But, we can argue that a central firm is necessary to coordinate scattered transactions in the absence of a collective body. The power of the central firm is not unilateral but depends on the degree of specialization of members with regard to the central firm's assets. The "integrated organization" thesis (Baudry 2004) holds a different point of view. The power of some firms in the network is real and not only due to propriety rights on specific assets. Power depends also on critical resources such as ideas, good relationships with customers, new machines, management tools… From the conventionalist perspective, no particular member is central to the network. On the basis of common rules, members can create a central body to share the decisions, manage common resources, facilitate information flows and create new products and processes. This does not suggest that conflicts are absent between members. But each firm can participate to the evolution of the collective rules and processes.

The fifth dimension stands on the stability of networks. The exchange perspective suggests that network is an efficient arrangement to reduce information asymmetries. In dynamics, the stability of the network is not guaranteed: as far as the level of specificity varies, so does the nature of contractual arrangements. The overestimation of opportunism implies the instability of the network. By opposition, the production perspective considers the network as a mean to create new competencies and increase the predictability of the external environment. The collective dimension based on conventions, confidence, social and cultural embeddedness contributes to enforce the stability of the network.

From this short review, two archetypes of inter-firm network emerge (see Figure 2). The first type supports the contractual perspective (efficiency). In this network, we expect a central firm which coordinates the different elements of the final product. We will call this archetype "*the star network*". The second one illustrates the conventional perspective. In this network, firms may pursue common and complementarity goals. Coordination is not based on centralized mechanisms. It is based on common and collective well-accepted rules. We will call this second archetype the "*community network*".

Objectives of inter-firm network									
Contractual perspective					**Conventional perspective**				
Efficiency: To reduce costs and information asymmetries					**Learning** : To create new collective competencies				
Organizational design of inter-firm networks									
Formalization High level (contracts)	**Density** Low density (bilateral relations)	**Intensity** Moderate to high intensity (informational cooperation)	**Centrality** High centrality (Central firm)	**Stability** Low stability (opportunism)	**Formalization** Low level (conventions)	**Density** High density (complex patterns of relations)	**Intensity** High intensity (cognitive cooperation)	**Centrality** Low centrality (collective body)	**Stability** High stability (confidence)
Archetypes of inter-firm networks									
Star network					Community network				

Fig. 2. The two network archetypes (Adapted from Williams 2005)

Three propositions are formulated to test the relevance of the network theories to explain the new industrial frontiers. Meanwhile, these propositions allow us to specify the nature and the architecture of inter-firm networks at work in the winter sports industry.

4.4 Propositions

At the beginning, we have formulated the idea of explaining the emergence and the nature of inter-firm networks in the winter sports industry. To set up this question on solid grounds, we explored four theoretical approaches.

The first two deterministic approaches do not give a model of inter-firm network. Yet, they explain the emergence of inter-firms relations in a productive system (industrial or spatial). The determinants of networking are exogeneous. They are taken into account in our empirical model as control variables (see Appendix 2). In that perspective, we can formulate a first proposition related to the emergence of inter-firm network in the winter sports industry:

P1 – The inter-firm networks frontiers in the winter sports industry are not confined to territories or firms' core business. The inter-firm network frontiers are defined by contractual or conventional strategic arrangements.

The last two theories helped us to design two types of inter-firm networks (star network and community network). These archetypes are different according to their objective (efficiency versus learning) and their structure (formalization, density, intensity, centrality and stability). To explore these models empirically, we can formulate the following propositions:

P2. In the winter sports industry, the two inter-firm networks archetypes can coexist: the star network is a guarantee for temporary adjustments. The community network is for long-term arrangements and allows firms to create new capabilities and competencies to cope with uncertainty.

P3. In the winter sports industry, the two archetypes are complementary. The community network may be the link between firms belonging to the value chain and firms belonging to the territory (skiing resort). This network is the area where they can discuss and invent common values and rules.

5 Results

We used a qualitative method to collect data from the actors of the winter sports industry. An interview grid was especially designed for this purpose. This methodology is consistent with our exploratory step which aims to qualify logics and forms of coordination between the actors[10].

We selected the major firms of the two value chains. The interviews of their top managers were conducted from April 14th 2005 to July 1st 2005. Each stage of production is present (suppliers, producers, retailers). Ten top managers were interviewed (see Appendix 1). All firms act in very concentrated market configurations[11]. Each interview lasted on average three hours and was conducted by two researchers. The retranscription of the talks has been validated by each respondent. The check of the communicated data was carried out in a documentary way as well as with a posteriori cross validation with other interviewees.

Data were processed through two techniques: (1) post-coding the textual data with the assistance of each interviewee, (2) use of a « verbatim » data processor with the Sphinx Lexica software.

In this section, the three propositions are tested to specify the nature and the structure of inter-firm networks in the winter sports industry. The first proposition aims to define the significant industrial frontiers (5.1). The second proposition tries to assert the coexistence of the two types of inter-firm networks (5.2). The third proposition questions the complementarity of the two networks (5.3) and the role of local actors in the game (5.4).

[10] We have studied the network from the final product point of view (tourist stay). This methodology is well adapted to analyse the relation patterns between the members and their ongoing behaviour.

[11] In each market, the main actors are generally less than seven.

5.1 The Inter-Firm Networks: Validity of a Territorial or Industrial Activity Division (P1)?

Figure 3 below describes the relations between upstream and downstream actors according to the nature of the final product (skiing holidays). We conducted a bivariate analysis on the nature of the respondents and which kind of actors they were in relation with[12]. The results of this analysis are mapped to facilitate the interpretation. It shows the proximities that exist between actors in the winter sports industry. We note the coexistence of two inter-firm networks that are a priori distinct.

These two inter-firm networks share a common point: they federate heterogeneous firms through their principal activity and their position in the industry. Yet, these relations relate indifferently to firms belonging to the two value chains at any stage of the industry. This first observation confirms the limits of the classical industrial models. The final product cannot be confined to a branch of activity (within the meaning of accounting methods). It is a complex product, combination of separated elements (lodging, leisure, sports practices …) sold contractually. This concept of assembling and regrouping is at the core of network activities.

The difference between these two inter-firm networks can be appreciated in terms of the nature of the actors. One network excludes the intermediate actors who usually sell a total service such as Tour Operators. The reference product here is a Business to Consumer product (B2C). It is the tourist himself who carries out the task of researching and assembling, by establishing direct relations with the service providers or the product retailers. This "actorconsumer" may use IT (e.g. market places) to guide his choice or use more traditional information systems (e.g. Tourist bureau).

By opposition, Tour Operators stand in the centre of the second network (Business to Business network). They are major providers of all inclusive offers. They are in charge of combining and booking any elements of the final product (lodging, ski lifts, ski packages …) and sell it under particular price conditions.

The role of the skiing resort is very different depending to the network. In network 1 (B2C), firms are totally anchored in a territory. The tourist chooses first his destination, the skiing resort. When on the spot, he will choose all the services to put together his holidays. The local producers will coordinate themselves to increase the final product value. From that point of view, "the coordination of the activities on the spot is the fundamental element: the actors and their interactions are more important than their products" (Longhi 2004, 73). The emphasis is put on the organizational complementarity and the interdependence between actors sharing the responsibility to manage flows of tourists.

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[12] 0= no relation; 1= relation with equipment producers; 2= relation with sport goods producers; 3= relation with sport goods retailers; 4= relation with Tour Operators; 5=relations with events producers; 6= relation with developer contractors and lodging providers; 7=relation with ski lift companies; 8= relation with local public institutions.

On the contrary, in network 2 (B2B), the actors acknowledge the a-spatialization. Their role is to ensure the production and the management of the whole bundle of destinations in competition. Insofar as the final product is all inclusive, the local actors have little role to play. As we shall see further, they have very small room for manoeuvre.

The place of the skiing resort differs according to the type of the product. This second observation puts at fault the territorial approaches of the tourism system. Indeed, the territory cannot be seen independently of the upstream actors even if they work to extract themselves from any territorial anchoring (B2B).

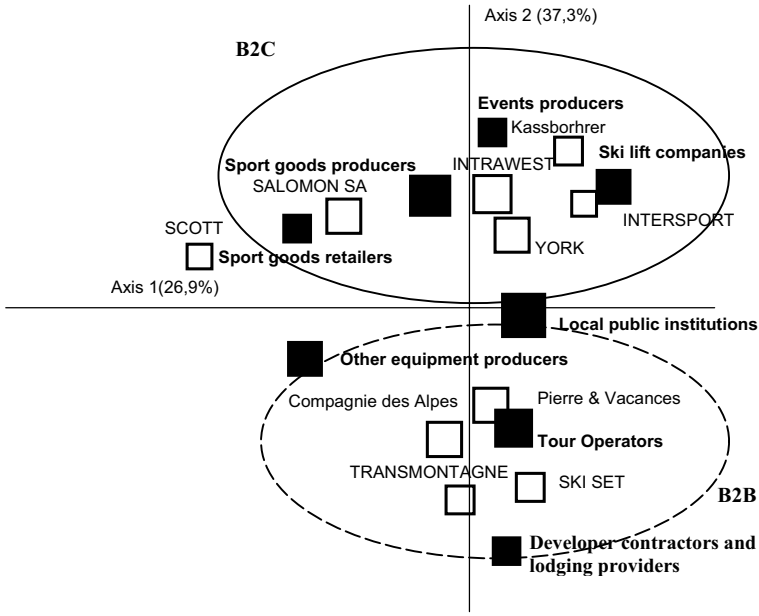


Fig. 3. The two inter-firm networks and their members

5.2 The Objective of the Two Inter-Firm Networks: Contractual or/and Conventional Perspectives?

According to the objective of the managers "to pursue common goals" and "to preserve a reputation", we can assess that network B2C looks consistent with the conventionalist perspective. Indeed the collective dimension looks fundamental, as one of the managers declares "we feel very close to all skiing resorts in every country. Skiing resorts try to capture the tourists; we try to equip the tourists with sport goods. There is a community of interest". This dynamic is supported by a low competitive pressure insofar as the consumer has already chosen his destina-

tion. The objective is to offer on the spot services and products of high quality to increase the tourists' consumption and gain their loyalty.

The common critical resource of the firms in the network is the image of the skiing resort. The valorisation of this image is due to the organizational complementarity between all actors. For instance, some key actors such as events producers, sport goods producers and retailers contribute directly to increase the value of the final product by mean of events. The firms in network 1 (B2C) show clearly a logic of complementarity and collective learning to create new productive solutions to provide a tailored offer (One to One offer).

The internal mode of regulation of the network is mainly based on non contractual devices such as the feeling of belonging to the same community, common rules of behaviour, shared representations and conventions (see Appendix 3). Relations are essentially informal and based on confidence. However there is one exception: the relations between the sport goods producers and the retailers are made on contractual arrangements. These arrangements are most often negotiated by central merchandisers leaving few rooms for manœuvre to the local retailers.

Network 2 (B2B) works on another kind of logic (see Appendix 3). The all inclusive formula is the result of a cooperation aiming at the optimization of the occupancy rate and the short-term profitability of the skiing resort. "It is a comprehensive insurance against the risk of a bad weather forecast"[13]. The task of the actors in the network is to sell an all inclusive service at a fair price. The attractiveness of the skiing resort rests on its capacity to propose the best quality/price ratio.

The pressure exerted by Tour Operators is strong and their capacity to negotiate their commission is illustrative of that aspect. This type of network excludes a priori some non significant actors or those who refuse to integrate this kind of product (e.g. Intersport). The division of the quasi-rent takes place primarily between two types of large firms. On the one hand, there are Tour Operators who hold the critical resource of access to the market. On the other hand, there are lodging providers and ski lift companies who own the localized specific assets. The posted objective is to minimize the costs and optimize the result.

This objective is sustained by formal and explicit contracts between Tour operators and ski lift companies, and these contracts are renegotiated each year. Market incentives are still present. They protect against opportunistic behaviour. This dynamics is consistent with the transactional description. Yet we can notice that some lodging providers and some developer contractors do not regulate their relations with Tour Operators and ski lift companies on contractual mechanism (i.e. confidence). This is not surprising insofar as some ski lift companies or Tour Operators do themselves provide the lodging or develop the skiing-resort (e.g. Intrawest, Transmontagne).

[13] According to the top manager of a ski lift company.

5.3 Coexistence and/or Complementarity of the Two Inter-firm Networks? (P2)

Let us describe the two inter-firm networks according to the five dimensions of our empirical model. The post-coding operated on the five variables: formalization, density, intensity, centrality and stability of the network, leads to the following results (see Figure 4 below):

B2C network					B2B network				
Formalization (-)	Density (+)	Intensity (+)	Centrality (-)	Stability (+)	Formalization (+)	Density(-)	Intensity (+)	Centrality (=)	Stability (=)

Fig. 4. Organizational design of inter-firm networks

Network 1 (B2C) is composed of a large number of heterogeneous actors, linked on the basis of complex patterns of cooperation, going from "daily break at the coffee-shop to the annual meeting of the tourist bureau". Some managers acknowledge concluding new partnerships on a simple handshake.

The social, cultural, spatial and organizational proximities contribute to a climate of confidence between actors who do not require a priori formal arrangements whatever the nature of investment. The exercise of formalization would drive to an unproductive result and would generate a climate of suspicion and control.

The actors consider the intensity of the relation to be strong. They easily conceive strategic dimensions associated with the objective "*to do better together*". The mutual interest is well understood and the prospect of increasing the quality of the collective final product is part of their concerns. The perception of their own contribution to the output gives them a fair representation of the quasi-rent division. Coordination between the actors is made complex because of a multitude of interaction in time and space. There does not exist a priori a central firm whose object would be to organize the collective production on the spot. However, two significant actors appear. These actors are the ski lift companies and the tourist bureau. The former plays a part in the diffusion of information towards the other actors to create the basis of a common representation or a "strategic vision for the future". They put at the disposal of the local actors, each year, their market information system so as to create a learning process. It is important however that the ski lift companies do not impose their own vision and individual objective going against any collective dynamics. From this point of view the tourist bureau is responsible for setting up governance committees open to the whole set of producers,

including the non localized producers. The meetings are held out according to variable reasons and rhythms. No formal instrumentation is required.

The stability of network B2C is real and enforced by the small number of new entrants or the proximities between actors: "*every one knows everyone; it is a small milieu!*[14] ".

Network 2 (B2B) differs from the expected results on the basis of two dimensions (centrality and stability). This leads to amend partially the theory of Transaction Cost Economics. Regarding formalization, density and intensity, our results are in line with the theoretical predictions. Relations between actors are generally bilateral and rest on the couples of Tour Operators/Ski lift companies and lodging providers/Tour Operators. These relations are controlled by formal contracts in which all the characteristics of transactions are negotiated. Some contracts comprise specific clauses (exclusiveness) to fight against opportunism. The relations between contracting firms can be conflicting. However, the impact of Internet is real and gives power to ski lift companies over Tour Operators. The result is more balanced relations insofar as some ski lift companies operate a large bundle of skiing resorts. The strategic value associated to this B2B network is essential for the skiing resorts because it ensures interesting markets (China, Central Europe, Eastern countries). Some ski lift companies seek to gain power over Tour Operators by developing their own tour operating activity (e.g. Transmontagne). The evolution of this type of network may result in an exacerbation of the competition generating new fears, suspicions of opportunism.

This implies a certain ambiguity on the centrality dimension. Our interviews showed the power of actors. Power is scarcely exerted by the firm which holds the localized specific assets (as stated in the Transaction Cost Theory). More often, it is the firm which has the critical resources (access to the market) which is able to exert power. These critical resources represent expansive investments in IT. Thus one could conclude to the existence of symmetrical relations. However, the ski lift companies tend to gain power, investing directly in tourism market places or creating their own on-line travel agencies. We are not able to measure precisely the level of commitment of these companies in this direction. Nevertheless, it seems significant for at least one actor out of two.

Ski lift companies are able to offer exclusive and quality oriented products. This kind of offer helps them to negotiate with Tour Operators on better conditions. This implies that the success of the all inclusive final product depends on the quality of the coordination between all the producers. We understand here why ski lift companies, relayed by the tourist bureau, act as an interface between the two network dynamics.

[14] According to a snow-grooming machine producer who commits himself to the organization of events in skiing resorts.

5.4 What Part Do the Local Actors Play in the Final Product? (P3)

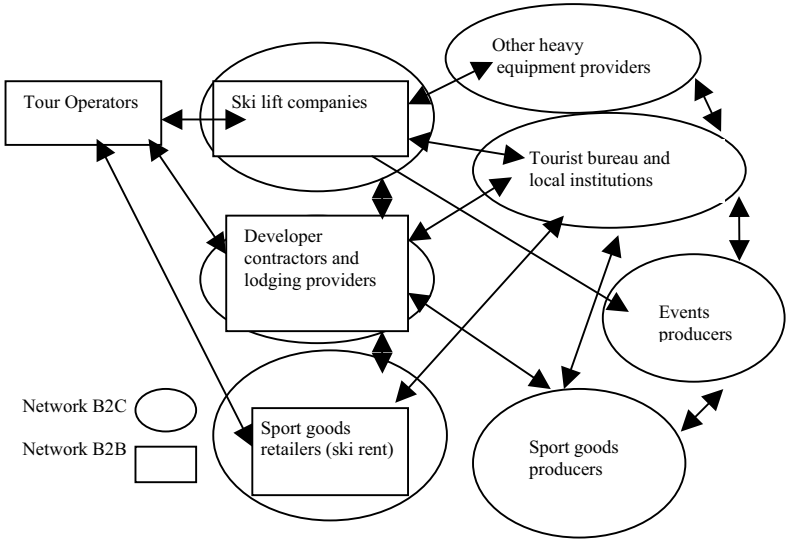


Fig. 5. The winter sports industry: two complementary networks

The firms interviewed are at the core of the two logics (see figure 5). For some of them at the end of the value chain such as sport goods producers or retailers, restaurants, leisure services, these two logics may appear contradictory. The pressure exerted by some retailers and the incapacity of the ski lift companies (or public institutions) to negotiate advantageous conditions results in a destructive competition and depreciates the global image of the skiing resort.

The ski lift companies do not always play the collective game. They are most often trying to increase the short term profitability. However, one respondent asserted a 15% total growth in turnover while only 3% growth in volume. This reveals the effectiveness of the coordination between all the actors of the industry. Obviously, this valorisation of the tourist stay is due to the two (B2C and B2B) networks. It is by an increase of quality on the spot that the intermediaries agree to negotiate their margins insofar as the strategic variable is no longer just the price. This strategy of valorisation and differentiation of the final product confirms the importance of the community network. The community network may be the link between firms belonging to the value chain and firms belonging to the territory (skiing resort). This network is the place where they can discuss and interpret common values and rules. Up to now, there was no other area where they could confront their different values. As a matter of fact, the B2B network federates only the large operators mostly subjected to profitability requirements. The values are industrial and financial. The B2C network is structured around

the same large actors who hold the localized specific assets as well as small firms which carry on community and patrimonial values. Their ability to create a common vision and operate a collective learning process is the key success factor of the territory (skiing resort). Thus, it is necessary to study the mechanisms of regulation (stakeholder governance). This must be done not only within the geographical boundaries of the skiing resort but also within the frontier defined by shared conventions.

6 Conclusion

The reorganization of the winter sports industry results in new inter-firm relations whose nature and frontiers exceed the traditional scheme of economics. On the one hand, these relations are not due to exogenous constraints, which the actors would undergo. It reveals a real strategic intent of the actors to coordinate each other in quality. From this point of view, the deterministic models must be dismissed. On the other hand, we have shown that the coordination to produce the final tourist stay is more important than the actors themselves. This could be done thanks to the concept of inter-firm network. This concept has been analyzed through two a priori different approaches. Hence, we have defined two network archetypes. In the star network, actors seek efficiency and are linked by bilateral contractual agreements. By opposition, the community network aims at creating new productive solutions where “scattered” actors are engaged in a learning process. Multilateral and non contractual relations are guiding their path.

From the confrontation of these two networks, we can conclude that they are complementary. This complementarity is mainly due to the role of the ski lift companies and the tourist bureau. This does not mean that they have received a delegation of responsibilities, or that they exert their power. Would it be the case, there would be no collective dynamics. Indeed, it is more a game where cognitive resources are put at the disposal to the networking firms in order to build together new conventions.

The data collection we are actually carrying out in nine French skiing resorts will help us to better understand the dynamics of the community networks. We will then be able to analyze thoroughly the collective learning processes within the conventional frontiers of the skiing resorts.

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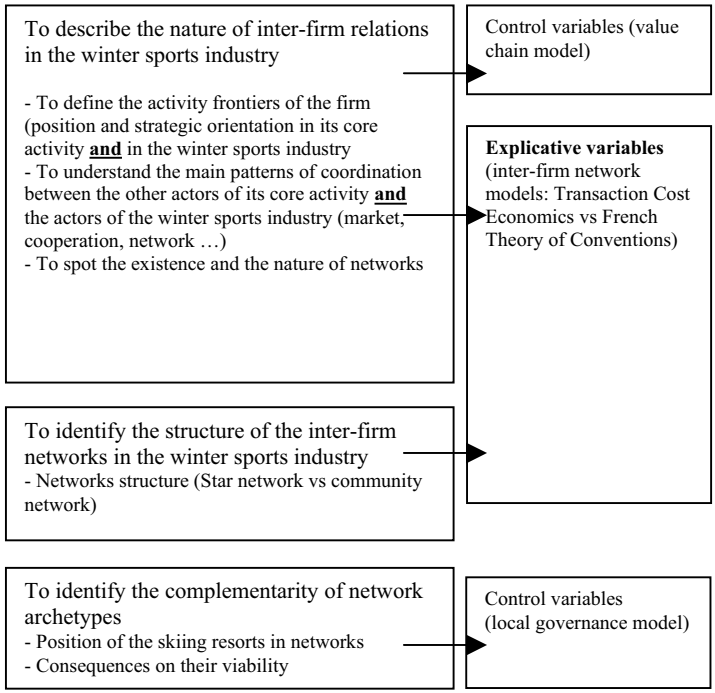
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Appendices

Appendix 1. Nature of the respondents

Value chain	Market share or position on the pertinent market	Function of the respondent
Value chain : leisure and sports practices in mountains		
Heavy equipment providers	**York Neige** (37,77% - leader of the snow production)	Marketing manager of the European subsidiaryYork Neige
	Kässbohrer (60% - leader of the snow grooming machines)	General manager of the French subsidiary
Ski lift companies	**Compagnie des Alpes** (Largest ski lift company ; operates ski lifts in many European skiing resorts)	General manager-CDA Domaines Skiables
	Transmontagne (French leader operates ski lifts in skiing resorts of medium size (from 2 to10 M euros)	Chairman of the holding Transmontagne
Tour Operators, developer-contractors and lodging providers	**Intrawest** (developer contractor and operator. World leader)	Vice-Chairman of the European division
	Pierre&Vacances (Lodging provider. European leader)	Operations manager Rhône-Alpes
Value chain : sport good outfits		
Sport goods producers	**Salomon** (World leader)	Brand manager
	Scott USA (World leader in ski poles)	General manager of the French subsidiary
Sport goods retailers	**Intersport** (French leader of sport goods retailing)	Mountain retail manager
	Ski Set (French leader of ski rent)	Chairman of the company

Appendix 2. Architecture of the Interview Grid


To describe the nature of inter-firm relations in the winter sports industry
- To define the activity frontiers of the firm (position and strategic orientation in its core activity and in the winter sports industry
- To understand the main patterns of coordination between the other actors of its core activity and the actors of the winter sports industry (market, cooperation, network …)
- To spot the existence and the nature of networks
Control variables (value chain model)
Explicative variables (inter-firm network models: Transaction Cost Economics vs French Theory of Conventions)
To identify the structure of the inter-firm networks in the winter sports industry
- Networks structure (Star network vs community network)
To identify the complementarity of network archetypes
- Position of the skiing resorts in networks
- Consequences on their viability
Control variables (local governance model)

Appendix 3. The Nature of the Two Inter-firm Networks: Contracts Versus Conventions

We explore the nature of the inter-firm arrangements between the respondents and the actors of the winter sports industry (blank= no relation; 2= formal and contractual arrangements; 3= informal and conventional arrangements). With this result, we have a clearer representation of the nature of the two inter-firm network archetypes. The conventional inter-firm relations are dominant in the B2C network whereas the contractual relations are more important in the B2B network.

Table 1. The B2C Network

	Sport goods producers	Sport goods retailers	Events providers	Ski lift companies	Local institutions
Compagnie des Alpes	2.00	-	-	-	3.00
INTERSPORT	2.00	-	-	**3.00**	3.00
INTRAWEST	2.00	2.00	2.00	**3.00**	3.00
Kassborhrer	2.00	-	3.00	2.00	3.00
Pierre & Vacances Tourism	-	2.00	-	2.00	3.00
SALOMON SA	3.00	2.00	2.00	-	3.00
SCOTT	3.00	2.00	-	-	-
SKI SET	2.00	-	-	-	3.00
TRANSMONTAGNE	-	-	-	-	3.00
YORK	-	-	3.00	2.00	2.00
MEAN	**2.29**	**2.00**	**2.50**	**2.40**	**2.89**

Blank = no relation ; *2* = contractual arrangements ; *3* = conventional arrangements

Table 2. The B2B Network

	Heavy equipment providers	Tour operators	Developer contractor and Lodging providers
Compagnie des Alpes	**2.00**	**2.00**	**2.00**
INTERSPORT	-	-	-
INTRAWEST	-	2.00	-
Kassborhrer	-	-	-
Pierre & Vacances Tourism	-	**2.00**	**3.00**
SALOMON SA	2.00	-	-
SCOTT	2.00	-	-
SKI SET	-	**2.00**	**3.00**
TRANSMONTAGNE	**2.00**	**2.00**	**3.00**
YORK	2.00	2.00	-
MEAN	**2.00**	**2.00**	**2.75**

Blank = no relation ; *2* = contractual arrangements ; *3* = conventional arrangements

The Influence of Financial Institutions and Investor Behaviour on Company Management Practice

Tahir M. Nisar[1]

Abstract. New trends in investor behaviour have emerged in recent years. It is believed that activist investors involve themselves in the companies in which they invest through influencing company strategy and through using their knowledge and contacts to introduce portfolio companies to networks of suppliers and customers, professionals and alternative sources of finance. We carry out a case study research to examine these trends. The findings empirically confirm the importance of organizational structure for the process of investor engagement. They show that independent and more specialized investors are much more involved with their companies than captives. Experienced and knowledgeable partners are also more likely to offer advice and support services. We also find examples of investor influence in company management in areas such as strategy, human resource management and performance evaluation.

Keywords. Investor engagement, organizational focus, venture capital.

1 Introduction

It is widely believed that investing institutions can have a considerable impact on management behaviour of those companies in which they invest. Investor behaviour and the relations between investors and management practice have acquired new significance because of the rise of shareholder value as the measure of corporate performance, enforcement of higher standards of financial responsibility,

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and investors' grievances about some key aspects of management practice (Black 1998; Karpoff 2001). However, as Porter and Ketels (2003) note in their report on UK Competitiveness, 'there is little systematic evidence on the impact of the UK financial market on UK companies' strategy and investment choices.' We carry out a case study research to examine the influence of financial institutions and markets on company management practice. The assumption behind this work is that investors, in order to maximize their returns from their investment, will pay considerable attention to the strategic and human resource practices.

The relationship between investor behaviour and human and organizational development (involving different types of investors, including private trusts, private equity investors and institutional investors) has only recently become an active research area. Investor activism is used in this literature as a term for the use of power by an investor to influence actively the management processes or outcomes of a given portfolio company (Black 1998). This can be contrasted to a traditional 'arms-length' approach to investment which relies mainly on the threat by the investor of 'exit' and executive incentive contracts to align the interests of investors or owners and managers. The literature suggests that other governance tools are necessary for the efficient control of agency costs and the management of risks. Investors can reduce such problems by directly engaging with the company (Romano 2002). Engagement therefore is a means of matching investor expectations and actual company practice.

The chapter examines these relationships, drawing upon eight private equity fund case studies and eight case studies of portfolio companies funded by private equity finance. The results of this research suggest that investor engagement is alive and well, both in the form of shareholder activism and the more direct and active form of investor participation in company management decisions. The case studies further suggest that there are significant returns to investor engagement, particularly when investors have considerable expertise in the areas in which they are investing. The research did not find evidence of a negative effect of investor activism through an overly short-termist approach on the part of investor funds. The business models vary from one investor firm to the next, but at least in these case studies, it would probably be fair to characterise the investors' time frame as medium-term.

The chapter is organized as follows: The first section introduces the relevant literature and suggests the likely areas of investor influence in company management practice. We then discuss our case study findings, including an evaluation of the deals completed by private equity firms. We conclude by indicating potential areas of future research.

2 Conceptual Framework

Conventional agency theory is concerned with aligning the interests of shareholders (the principal) and those of managers (the agents) (Jensen and Meckling 1976). Shareholder value results from managers' actions, which shareholders are not in a position to monitor directly; their success is only evident *ex post*. Managers receive compensation according to their 'effort' and success. For shareholders, the major problem is to incentivise managers to act in the best way to maximize shareholder value. However, shareholders are unable to ensure such maximization because of the lack of information on management practice. To remedy this deficiency the conventional solution is the creation of interest alignment through stock options and similar arrangements. However, this alignment is fragile because of information asymmetry, i.e. the shareholder's lack of knowledge compared with managers. Accordingly, more investor activity is required. It is hypothesized that investor engagement can positively influence the value of equity.

The most fundamental change in investor behaviour in recent times is increased investor activism (Romano 2002). However, there is a problem in defining investor activism. Merely taking the time to understand what's going on in the company and vote is a form of activism, as is any kind of proactive approach to company mismanagement. But much of the action is done behind closed doors. We define investor activism as the exercise of ownership rights by a concerned party either to influence a particular company's management processes or to evoke large-scale change in management processes across multiple companies through the symbolic targeting of one or more portfolio companies. All such actions can be described as the engagement process. Through these engagement processes, activist investors attempt to affect the strategic direction and performance of portfolio companies.

Investor engagement can be easily conceptualised within the principal-agent paradigm of corporate governance. As indicated above, agency problems typically involve asymmetric information and incomplete contracts in which gaps may be filled through the practice of engagement. Investor engagement thus involves relationships that are inherently incompletely specified and in which the knowledge of investors and managers differs. Engagement allows investors to influence key management practices to ensure optimum shareholder value, in contrast to the 'arms-length' relational approach favoured by the conventional finance model. Such approach is more sensitive than the financial version to the shortcomings of agency theory.

Within this framework, investor engagement is a contribution to shareholder wealth maximization. This assumes that company financial performance can be enhanced by improvements in its management practice. The UK's 2001 Modern Company Law Review advocates such 'enlightened shareholder value' – arguing that to maximize returns to shareholders, good managers must take the interests of other stakeholders into account.

As the goal of engagement varies, so, too, does the form of engagement, which ranges from co-operative to hostile. Some investors begin their intervention with behind-the-scenes influence and negotiation in private, co-operative meetings with company management (Byrne 1999; Pellet 1998); if this approach fails, they may next contact board members and company advisers (Useem 1996). Myners Principle Six advocates an explicit activism strategy addressing when the fund will intervene, with what approach, and how effectiveness will be measured (Committee on Corporate Governance 2000). The Combined Code states that institutional investors should make considered use of their votes, and where practicable enter into dialogue (Committee on Corporate Governance 2000). This suggests that investors can influence company governance in a variety of ways, including external control measures, internal governance measures, and measures relating to executive compensation that align incentives (Karpoff, Malatesta and Walkling 1996; Chidambaran and Woidtke 1999). The traditional 'arms-length finance paradigm' of governance is represented by control measures that affect outside bidders' ability to gain control and thereby maintain the option of 'exit' (Parkinson 1995). By contrast, engagement enables investors to exercise 'voice', and discipline management more directly and flexibly.

Although several leading UK and US investors now routinely apply engagement strategies, there are no agreed standards of engagement content, practice, reporting or governance against which their effectiveness and quality could be assessed (Deakin et al. 2001). We therefore develop a spectrum of engagement practices in Figure 1 that fall between 'indirect control' (of which exit and the threat of exit represent examples) and 'direct corporate control' as means of disciplining management. The means used to exert influence range from exit or the threat of exit, the traditional 'arms-length' approach, to direct shareholder control.

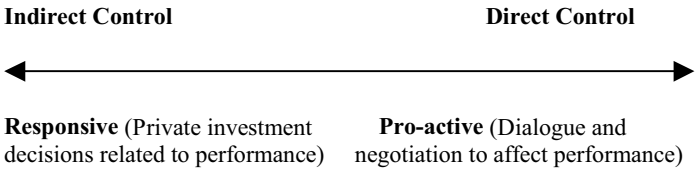

Indirect Control
Direct Control
Responsive (Private investment decisions related to performance)
Pro-active (Dialogue and negotiation to affect performance)

Fig. 1. The spectrum of engagement

Effective negotiations require credible threats. For example, in the case of private equity, this may involve the refusal to issuance of new securities by the portfolio company, the change in managerial incentives or the outright dismissal of the existing management team. Investor engagement therefore differs from arms-length approaches, as institutions typically use their leverage to negotiate or demand changes in management practice (see Table 1). Therefore dialogue rather than the threat of replacement is the norm in the current climate of equity investment.

Table 1. The paradigms contrasted

	Arms-length approach	Engagement approach
Aim	To maximize shareholder value	To maximize shareholder value
Business case for 'activism'	To create suitable management incentives	To improve company management practice
Use of voice	In response to performance	To affect and improve performance
Engagement targeting	Company-oriented	Issue-oriented
Collaborative partners	Primarily other investors	Investors and stakeholder groups, including senior managers, employees and suppliers
Standards for engagement	Loose; open	'Proprietary' to a coalition; process and content

3 Case Studies

The extent of engagement by private equity funds and their influence on management practice was explored using primary case studies. This research covers eight private equity fund case studies and eight case studies of portfolio companies funded by private equity funds (Appendix 1). Each private equity fund also submitted three to five deals from which they had exited. Private equity investments are structured so as to provide strong incentives for portfolio company management and to provide mechanisms through which general partners can effectively monitor and control their investments. In addition, private equity firms can exert influence through staging funding to portfolio companies, with additional funding being contingent on company and managerial performance. This investment approach thus lends itself easily to a detailed examination of how investors can influence company management practice.

This study is of an exploratory character. The purpose was to increase our knowledge of investor-investee relations by conducting and comparing the case studies (Lijphart 1975). The analysis enables us to gain an idea of how the processes have evolved and of the problems and patterns which crop up within them, make a preliminary assessment possible. In addition, the study may form the basis for a more well-founded evaluation of the course and outcomes of investor-investee relationships and offers indications for the improvement of the quality and effectiveness of investor engagement. The research population consists of major private equity firms and portfolio companies, representing all key sectors of the economy. The cases studied form a substantial part of this population, which justifies generalizations about the influence exercised by investors in

company management. The case studies are based on interviews with companies and investors, supplemented by desk research that includes company literature and press reports. The degree of detail included in each study varies but the main areas covered are:

For investor companies:

- how they approach the monitoring of, and interaction with, investee companies - what makes investors more active and engaged with the companies they finance;
- their engagement style - how engagement activities are performed and structured;
- their evaluation and reporting - their formal and informal interaction with investee companies;
- their influence over investee company management through all these means; and
- the extent to which better performance leads towards a planned/early investor exit.

For investee companies the influence of investors on:

- strategy and performance - including overall strategy, strategy on acquisitions and disposals, new product development and operational performance;
- approach to general management issues such as employee recruitment, compensation, marketing activities, outsourcing etc; and
- conventional corporate governance, such as compliance with the Combined Code, directors' remuneration, board succession etc.

Case studies are also used to assess the assumption that equity partners: (a) use selective methods to engage with the companies in which they invest; and (b) have a significant impact on company performance when they do intervene (this can be seen from the planned/early exit of investors). Thus investor engagement involves valuable services to portfolio companies like advice, support and corporate governance. However, the form of intervention by institutions depends on an understanding of the full effect of such interventions on portfolio company management practices.

4 Investor Engagement

A central question for understanding investor behaviour is the extent to which investors play an active role in the companies they finance in addition to allocating funds. The literature on private equity funds identifies several dimensions of engagement, such as monitoring, corporate governance, as well as a number of in-

formation-based advice and support services. Central to this approach is the observation that investors not only supply capital but they also proffer necessary expertise and advice, in addition to facilitating information exchange and dialogue among a network of portfolio companies. In seeking private equity investment a company is thus keen to use the investor firm's reputation and access to a network of relationships - with customers, suppliers, investments bankers and other important stakeholders. However, in the wake of the collapse of the new technology bubble of the 1990s, new developments in investor-investee contractual relations (e.g., term sheets) suggest that funds have tended to include stringent conditions in the way they structure their financing arrangements with portfolio companies. This is to ensure compliance with the funds' safeguards on matters ranging from portfolio company recruitment to supplier deals. However, the investor-investee relationship goes significantly beyond the provisions of a term sheet. We first discuss what makes an investor more active than others, and what types of strategies are at its disposal to influence the portfolio company management, including investment strategies, networking and corporate governance.

4.1 Active Investors

What makes some investors more active and engaged with the companies they finance than others may also shed light on the nature and scope of investor engagement. We argue that organization's 'strategic fit' is a key enabler of investor engagement, that is investors' capabilities/skills that match the needs of investees. Management research emphasizes strategic fit as a key component of corporate strategy (Milgrom and Roberts 1995). Furthermore, recent theories of investor behaviour and financial structure stress the role of organizational structure (e.g. investor focus in terms of its specialisation). In particular they show how organizational structure affects the processing of 'soft' information, which is at the core of financial intermediation. For example, private equity capital is one important form of financial intermediation. Equity fund partners can choose how much to become involved with their portfolio companies. Active partners can help their portfolio companies in many ways, including helping with professionalizing the management team, giving advice and support, creating strategic alliances, or exercising corporate governance.

How then does the strategic fit of a private equity firm - both in terms of organizational focus and human capital - affect its involvement with the companies it finances. Two main results are strikingly consistent across our measures of engagement. First, the engagement style is strongly related to a private equity fund's organizational focus. Private equity funds investing in one particular specialized area (e.g., biosciences) are significantly more likely to get involved with their companies. The same is true for firms that specialize their investment activities exclusively in venture capital deals (i.e. they do not engage in other investment activities such as buy-outs etc.) and for firms which concentrate on relatively few deals per partner.

Second, beyond strategic fit at the organizational level, we find that human capital is also associated with a more active engagement style. General partners with prior business experience are significantly more involved with the companies they finance. Table 2 summarizes our results from eight private equity firms.

Table 2. Investor engagement strategy

Engagement Method	Comment	Fund Practice (n=8)
Board membership	Funds nominate non-executive director (s) on portfolio company's board	This has now become standard industry practice (although 3i has only recently adopted the practice.)
Syndication	Funds collaborate with other investors	This is mostly a sector-specific practice, with three of the technology Funds studied collaborating with their peers.
Advisory Board	Funds have industry experts on their advisory board (e.g. IT luminaries in the IT sector)	A standard industry practice.
Affiliate Fund	Specialist fund for experts / prominent people (to get their help for portfolio companies)	Mostly found in the technology sector. The practice was first used in Silicon Valley.
Partners have background in specialist areas	Partners have education or experience in a specialist area such as science background or business experience	A shift has taken place in recent years from regional allocation of investment to sector-based allocations in all ventures studied.

Being a specialized private equity firm strongly favours an active engagement style. The more activist firms in our sample such as *Merlin Biosciences* and *Sitka* specialize in health-related businesses, whereas *Kleiner Perkins* and *Sequioa* are more concerned with high-technology firms. Furthermore, general partners in these firms deal with on average three portfolio companies at a time, while the industry practice is six on average. This means that firms that focus on one activity (i.e. venture activity in one particular sector) and firms that focus on financing relatively few companies per partner provide more governance and support to their companies.

The move towards the sectoral approach has not all been smooth sailing for many investors. Companies have had to confront organizational legacies stemming from their original regional approach to investing. For example, even though most of the *3i Group's* deal flow still comes from its far-flung offices, the setup has not always contributed to teamwork. "If you go back ten years, there was an attitude that 'this is my fiefdom, I will find the investment opportunities I want

within my territory, and the contacts within it belong to me," says the partner interviewed.

To ensure that new investments make sense for *3i,* the company has designated sector specialists, or domain experts, to vet proposals regardless of location. 'A deal is looked at from a global perspective,' explains the *3i* partner. 'What looks like a very good deal at a local level can on an international basis look very poor.' Professional staff anywhere can propose an investment, but it must be reviewed by a sector expert. For example, a country head of *3i* takes a look at many proposals relating to his specialty in an area such as telecommunications. But in a bow to internal political realities, the country team can veto an expert's demurral and proceed with the investment.

The challenge for general partners, if they want to develop a key role, is to understand more about a sector than anyone else and all the big firms, like *3i* and *Carlyle*, are moving that direction. Sector specialization means not only knowing the business issues prevalent in a particular sector well but also getting to know the key people in that field. Increasingly, competitive advantage will be built on this expertise because of the nuance and contextual detail needed for screening quality projects. To this end the large private equity firms are building up specializations in areas like biosciences, retailing and media so they can capitalise on new business ideas in those fields. "We've split our organization along industry focus lines so we don't just have people who understand private equity as a market but can also deliver insight on individual sectors. Our strategy is to focus on sectors where there will be a real payback in corporate finance activity," says the partner.

Investors also seek out expertise before committing themselves. In majority of the best deals, investors screened the deals by consulting the board, management, or an external expert source; thus securing the privileged knowledge was the first initial step in most of the successful instances. For example, *Kleiner* looks for entrepreneurs with interesting ideas for large, un-served markets, and they put those ideas into a framework of initiatives. In *Kleiner's* definition, an initiative is when several of its partners collaborate in an embryonic area. At any time, they have three or four initiatives that they are pursuing. These initiatives require intensive dialogue and coordination with portfolio company managers - providing advice and support in recruitment and any new contacts with suppliers and other outside parties. Sometimes *Kleiner* succeeds, as with communications, telecommunications, fibre optics, and the importance of that for Netscape and Amazon - two of its portfolio companies. Other times, *Kleiner* fails, as with pen computing. This sectoral emphasis - initiatives - is the key driver of *Kleiner's* success in the venture industry.

A more active engagement style is also found to be associated with private equity partners' human capital. This is in line with the results of Kaplan and Schoar (2003). They investigate performance persistence and the relation of fund performance to capital flows, fund size, and overall fund survival. They find that performance increases with fund size and partnership experience. The types of issues on which general partners are involved are to do with monitoring, networking and

strategic issues. This reflects the special abilities that general partners possess. Contacts that general partners have with a range of companies, professionals and other financial institutions provide a network that managers can use in running and developing their companies. The knowledge that general partners have acquired through investments over time in other companies also is of use to the management of present investments in developing and implementing strategies. Our case studies find that the skill mix of private equity firms particularly influences the relationship with portfolio companies. Specifically, the more activist partners are those that:

- Have worked for many years in the equity capital industry;
- Have run businesses so could understand the challenges faced by portfolio companies; and
- Have specialist or a technical background that is aligned with the investee company (e.g. bioscience or IT).

There is less evidence of general partners assisting with operational issues, and there are suggestions that general partners are not involved in day-to-day management. General partners also have an important role in the dismissal of existing managers and the appointment of replacements. This would be consistent with the general partners taking the view that the success of portfolio companies depends on the quality of their managements. If the composition of the management team is the key to success, then it is appropriate for private equity firms to play a key part in dismissal and appointment proceedings.

4.2 Engagement Styles

Investors in private equity firms demand a high rate of return, and the structure of limited partnerships provides general partners with incentives to meet these demands. The way in which private equity investments are structured both provides managers of portfolio companies with incentives to meet the expected high returns, and allows general partners to monitor and intervene in portfolio companies. There is some uncertainty about the extent to which private equity firms do in fact intervene in companies in order to obtain superior returns. Baum and Silverman (2003) suggest that in the case of start-up companies, private equity firms act as both *scouts* in identifying companies with potential, and *coaches* who assist in realizing that potential. The high returns may be secured through the selection of companies in which to invest, and/or through active post-investment involvement.

4.2.1 Patient Capital

In line with Baum and Silverman's arguments, the present research finds that private equity firms are both expert scouts and coaches and that they take a long-term view in their investment goals. The evidence shows that the built-to-last strategy

can reward patient investors. *Sequoia* is still on the board of Cisco (an IT outfit), 13 years after it first invested. Similarly, one of its partners has been on Intel's board since the early 1970's. *Sequoia* has maintained a long-term commitment to building companies that contribute not only to Silicon Valley, but also to the national and global economies. As its partner interviewed put it: "Our primary goal is to encourage investment in growth activity – we aren't necessarily looking for short-term gains. The firm's ethos is all about promoting procedures and processes that create the possibility of long-term growth."

The rewards associated with this built-to-last strategy are likely to result in equity capitalists structuring their portfolios in a way that helps meet their long-term commitments. Consequently, they are likely to work to identify new products or technology applications with potentially large markets that provide opportunities to build major companies, whether in the US, Germany or the UK. For example, the working models of *Amadeus* in the UK and *TechnoStart* in the Germany are similar to the *Sequoia's*. The selection mechanisms they use invariably favour business concepts with the potential to generate long-term returns.

Sequoia is an interesting example of 'new economy' firms. They attempt to create value in ways that differ greatly from the manufacturing model. In traditional value chain firms (e.g., mass production organizations such as Ford and General Motors), the main activity trade-off is between differentiation and low cost. Increasingly, however, firms are creating value through people and IT networks (e.g., AOL) or by providing knowledge-based solutions for customers (e.g., *Kleiner*). Knowledge firms, such as *Kleiner* and *Sequoia* make tradeoffs between the depth of specialization in particular areas - which can only be acquired after a period of time - and the breadth of problems they can take on. For example, *Sequoia* has a policy of limiting its investment to a few specific areas like high technology industry. Similarly, *Amadeus* concentrates only on bio-sciences projects while *TechnoStart's* main focus is high technology firms. These trade-offs not only help create specializations, as we discussed above, but they also add value to the existing concerns.

4.2.2 Investor Networking

Private equity firms differ in the amount of time they devote to post investment monitoring and intervention. Elango, Fried, Hisrich and Polonchek (1995) identify three levels of involvement: *inactive*, *active advice-giver*, and *hands-on*. Involvement by the inactive group is mainly confined to attendance at board meeting. This classification is similar to the one of MacMillan, Kulow, and Khoylian (1989) who found three clusters: *laissez faire*, *moderate*, and *close tracker*. These classifications underline the fact that investors seeking high levels of engagement can help their portfolio companies in many ways, including giving advice and support, helping with the team culture, creating strategic alliances, or exercising corporate governance. Equity funds can also spur their companies' innovation. However, as the above findings show not all equity funds are alike. Using the in-

dustry's language, some are "hands-on," while others are "hands-off" investors (BVCA 2002).

Where private equity firms adopt a *hands-on*, or active, approach to managing their investment they become involved as a business partner in the portfolio company. In many cases they participate through representation on the board, with either an executive of the private equity firm or external consultant appointed as a director. The BVCA comments that private equity firms are rarely involved in the day-to-day operations of the portfolio company. Private equity firms taking a *hands-on* approach both monitor portfolio firms through, for example, reviewing management accounts and board minutes, and through involvement in decisions such as the purchase of major capital items, acquisitions and disposals, changes in strategic direction, appointment of directors and auditors, and changes in capital structure.

One example of this "hands-on" approach is the funds' emphasis on networking. *Kleiner* subscribes to the idea of *keiretsu*, a Japanese concept referring to networks of companies bound together by mutual obligations and contacts. Entrepreneurs gain access to its portfolio of companies and associations with global business leaders. These relationships are the foundations for strategic alliances, partnership opportunities, and the sharing of insights to help build new ventures faster, broader and with less risk. For *Kleiner*, internet-based technologies have provided a major opportunity to forge such a network. The *Keiretsu* reinforces the fund's ability to leverage the local insight of its investment professionals, collaborating across the firms' investment disciplines from deal sourcing and due diligence through portfolio company development. The result is a broader view of potential investment opportunities and deeper level of expertise, creating value for portfolio companies that translates into superior returns for investors. For example, *Kleiner* claims to facilitate inter-organizational cooperation among its network of portfolio companies by 'brokering' strategically important information among them. As evidence, the company claims that there are over 100 strategic alliances among its portfolio companies.

4.2.3 Corporate Governance

As the discussion above suggests how involved general partners should be with companies in their investment portfolios is an issue for *both* investors and investee companies. Traditional wisdom is that partners should offer at least some level of non-monetary support to portfolio-company managers, perhaps by serving on the board of directors and providing financial guidance or advice on business policy decisions. Indeed, equity firm partners may have a level of control and directional power that exceeds their minority stakeholder position. Nevertheless, key questions remain about what type (i.e., formal and/or informal) and degree of investor involvement will most enhance the competitive position of a portfolio company.

We find that private equity firms exert control and influence primarily through formal board membership. General partners may be directors of portfolio companies and/or they may nominate outsiders as directors (see Table 2). In many cases

private equity firms dominate the boards of portfolio companies. Like voting control, the composition of the board membership may be contingent on the performance of the portfolio company, with poor performance leading to greater representation of the private equity firm on the board. Kaplan and Strömberg (2000) find that on average boards have just over six directors. Private equity firms have control in 26 per cent of portfolio companies, management have control in 12 per cent of cases, and in the remaining 62 per cent of companies neither the private equity firm nor management have control. In this study, we find that management had overall controls in most cases, although private equity firms maintained a minimum level of representation on each company's board.

In the early stages of company development, *Sequoia* tends to be involved with key hiring decisions, major changes of strategic direction, company positioning and financings. This is achieved by *Sequoia* holding a board seat with most of its companies, but not all. In some cases it has remained directors of companies for over ten years. Similarly, *Merlin* normally has a seat on each company board and likes to play a leading role in financing and other strategic events. Since many management decisions require discussion and dialogue, we find that investors' representatives influenced key decisions by attending board meetings, requesting additional information and/or recommending outside expertise or help. Many of the key decisions as examined in the case studies were taken at the relevant board meetings (e.g., the adoption of a stock option scheme by *Evotec*, recruitment of senior personnel by *Ardana* etc). These results are similar to the findings of Wijbenga, Postma, Van Witteloostuijn and Zwart (2003) who observe that the boards of portfolio companies serve as a sounding board, assist in formulating business strategy, assist in dealing with short-term crises or problems, and recruit and/or replace managers.

5 Investor Influence on Management Practice

It has earlier been noted that when equity funds support the professionalization of their portfolio companies, they are not only concerned with recruiting chief executive officers (CEOs), but can also become involved more deeply with building an entire management team. As companies develop from being start-ups to becoming large complex organizations, attracting highly talented employees becomes a key challenge. The development of human resource functions, including skill development, thus becomes an important aspect of professionalization, especially in high-technology and health sectors where human capital is critical. In traditional financial arrangements, investors concern themselves mostly with the financial aspects of the firm, but leave matters of internal organization to the entrepreneurs. The notion of investors being closely involved with investees suggests that they may even go as far as helping companies with their internal organization, including helping make decisions about specific marketing plans. This may involve introducing a new array of management practices, for example, stream-

lined inventory systems, more appropriate executive incentives and targeted sales and marketing strategies. In 71 percent of the deals studied, investors were found to be extensively involved in these activities. The investor influence is more vividly reflected in public to private deals.

These findings underline the widely-held belief that it takes more than solid financial support to get a company off the ground. Furthermore, as shown in Table 3, private equity firms influence developments further down the organization, in terms of playing a role in the introduction of stock option/bonus plans, the hiring of specialists such as sales and marketing personnel, specific marketing campaigns and the formulation of human resource policies.

Table 3. Engagement practice

Particular management areas of concern	**Specific Case Study Examples (n=8)**	**Deal Structures PEF Deals (n=30)**
Participated in discussions with investors over strategy (e.g., market share, competition, strategic alliances)	Ardana, iOra, and Primal had detailed discussions about alliances and partnership agreements.	64% of deals
Management process	Edscha, Blackboard and Evotec OAI took advice and technical help	71% of deals
Innovation policy	Primal Pictures and Plastic Logic discussed product development strategy	73% of deals
Employee recruitment & retention	Evotec OAI introduced specific programmes	64% of deals
Executive stock options/incentives	Edscha and Evotec OAI implemented incentive schemes	32% of deals
Marketing or advertising campaigns	Blackboard implemented investor proposals	40% of deals
Outsourcing	Edscha outsourced its activities	58% of deals
Performance measurement	Ardana, Primal and Plastic Logic introduced well-defined systems	79% of deals

5.1 New Managerial Processes

Venture-funded start-up companies often operate as a loose organizational system. Temporary teams are set up for specific skills (like securing initial funding, developing the first product, or building a sales organization), allowing different sets of skills to be brought in at each stage of a company's development. One consequence of this structure is that people move frequently from job to job based on personal contacts and networking. Their tenure is therefore often limited to very

short spells of stay with a particular company - ranging from a couple of years to only a few months. Such a fluid organizational structure presents opportunities as well as dangers to the very existence of the project concerned. Consequently, private equity firms strive to ensure stability and continuity of personnel and procedures to the extent it is desirable for a project's fruition.

The investor influence is most profound in the area of establishing new portfolio company managerial structures and processes. In 71% of the deals, general partners had either directly proposed some managerial process/action or arranged some technical help on a specific issue of concern to a portfolio company. *Amadeus* assists its portfolio companies in adopting innovative management practices, as for example when it provided technical help to *leatherXchange* for instituting a proprietary grading system for hides. The manager interviewed stated: "Leather is a worldwide industry that needs a central, neutral source of information and international standards. *LeatherXchange*'s progress this year is indicative of the potential in this market." He further observed, "the company started with a good idea, but lacked the skills needed to succeed in this kind of business. This was the major area of concern for us. We had to work together to ensure that *leatherXchange* develops its capabilities in its target areas of operations. For example, the development of the company's grading system was what we thought its core competitive factor. We worked on it by bringing in outside expertise and consultative arrangements."

TechnoStart provides support and expertise to develop academic projects as a start-up company. After finding that the technology works on a laboratory scale, further funding is used to support exploring the full commercial potential of the now validated technology platform. For example, it set up workshops with patent lawyers for *ItN Nanovation* – a company that makes nanoparticles for ceramic products.

5.2 Strategy

Extant literature highlights 'strategy' as a potential area of investor influence. Goodstein, Gautman, and Boeker, (1994) identify three functional duties of company boards: (1) *networking activities* which are to do with forming links between the company and its external environment, and securing critical resources; (2) *monitoring activities* which include dealing with internal governance issues, monitoring company performance and providing mechanisms to align the interests of management with shareholders; and (3) *strategy-making activities* contributing to the company's strategic decision-making processes. Our case studies demonstrate these effects in many ways (see Table 3 for information on deal structures). For example, network contacts of ventures can be useful in identifying business growth opportunities for investees (e.g., *Vectura* diversified its product range with the aid of *Sitka*), assembling investee staff with complementary skills (e.g., *Sitka* enabled *MSL* to form an experienced team of specialists) or helping conclude an

acquisition (e.g., Kleiner supported a merger between *Excite* and *@home* - two of its portfolio companies).

Ardana has used its venture funds to accelerate in-house research projects and to carry out a number of strategic initiatives for the acquisition, in-licensing and co-marketing of reproductive health products (for example, the second round funding in 2002 helped *Ardana* acquire two companies and make one licensing agreement). *Ardana's* success in developing an attractive product range has also prompted its ventures to pop up the question of its IPO (Initial Public Offering). As a result, *Ardana* has taken a major step closer to flotation by appointing a veteran of the industry as a new non-executive director. Its Chief Executive commented: "Luring a big hitter to join the company follows a stream of good news on funding, product launches and acquisitions over the recent past. Strengthening the board would make it easier for *Ardana* to float within the next 18 months – the target set by the ventures earlier this year."

Care UK's venture - *Sovereign Capital* - has helped the company to create new business concepts in areas as diverse as home from hospital, rapid response schemes, intensive homecare, and extra care schemes. *Sovereign* generally ensures that all fundamentals are in place: a high-calibre entrepreneurial management team with a proven track record, a compelling pitch, a clear vision, and the determination to build a scaleable business that has the potential to emerge as a brand or market leader. This is how *Sovereign* was able to mould the management practice of *Care UK* into delivering an innovative range of services in the UK's social services market.

Investors may also seek to influence those decisions which traditionally fall strictly within the company's operational domain. Marketing or advertising decisions are a case in point. Among the investment criteria of *3i* are long-term investment period of 3 to 7 years and adding value in the investee companies by offering advice, assistance in developing new products and services, recruiting key personnel and introduction to potential customers, strategic partners, financiers and investment bankers. In particular, the portfolio businesses must show they can advance to a higher level, such as capturing large global market share with a top quality product. *Silver Bird Group Bhd*, for example, has managed to repackage its bread and cakes in an innovative way to appeal to overseas customers. *3i* partners were instrumental in the way *Silver Bird* re-designed its packaging to create value for both itself, its customers and the *3i Group*.

Private equity firms are also frequently involved in outsourcing decisions (58% of the deals studied had an outsourcing component). *Carlyle* insists, as a condition of investment, that any company it invests in outsource its computer programming tasks to the greatest extent possible. Outsourcing has now moved up the so-called 'value chain.' The tasks being outsourced are increasingly sophisticated, and thus less subject to commoditization down the road (e.g., *Edscha* introduced a new supply chain management system at the behest of its investors). For investors such as *Carlyle* it has thus become vital to promote outsourcing as part of the general drive to maintain focus in investee company operations.

5.3 Innovation and Value Creation

The nature and scope of innovation (e.g., the provision of seed capital or incremental or continuous innovation) in start-up and growth companies can be a major investor area of concern. In 73% of the deals studied, investors gave advice or provided/arranged expertise on matters relating to innovation or research and development. Our case studies also document a number of methods which general partners employed to influence the innovation and R&D activities of their portfolio companies. For example, *Plastic Logic* is one of the innovative companies in *Dow's Venture Capital* portfolio which is creating 'game changing' technology. *Plastic Logic*, which spun out of Cambridge University's Cavendish Laboratory, has developed printable semiconductor polymer technology applicable to a variety of electronic products. *Dow* has provided initial finance to test and commercialize the company's technology. In 1997, Merlin established its first investment partnership to provide seed capital for U.K.-based biotechnology companies. The companies have since matured into some of the leading private biotechnology firms in Europe.

Other examples include *PrimalPictures*, *Ardana* and *Evotec* where venture funds were involved in one way or another in promoting new scientific or R&D projects. It may take the form of helping establish company relationships with universities or independent research bodies (e.g., *PrimalPictures* has extensive links with University College, London), getting the company to enter into partnership agreements with other innovators (e.g., *Ardana* concluded such agreements with the support of its ventures) or advising the company in relation to incentive packages for researchers or scientists (e.g., *Evotec* offered share ownership scheme at the recommendation of its equity partners). Companies in sectors such as new technology need to maintain a variety of innovation efforts if they want to flourish over the long run. One component of this strategy is to constantly pursue incremental innovations – in the case of *iOra* it was further developments in offline networking products. *iOra* has from the beginning established an information sharing mechanism that ensures that its investors have full information and rationale for its developmental efforts.

5.4 Employee Recruitment and Retention

The process of building up the internal organization, and, in particular, the employee base of a company, begins with the recruitment process. To address the contribution of equity funds more directly, we asked if investors were influential in shaping the human resource policies of a portfolio company. Our conclusions on the importance of sector specialization are echoed in findings on recruitment for senior level personnel. More focussed equity capitalists whose partners have extensive business experience are found to be fully involved with recruiting irrespective of the particular position in the management team. In 64% of the deals, inves-

tors had contributed to the formation of the company's human resource management policy.

The timing of certain milestone events that occur within the organization may also shed light on the extent to which investors are pressing for certain changes within the boundaries of a portfolio company. We examine if and when portfolio companies adopt stock option plans/bonus pay plan and we look at the first hiring of a vice president. Stock option/bonus plans are important for a variety of reasons - helping to attract and retain talent, providing high-powered employee incentives, or simply supporting the change within the organisation. Obtaining equity capital is indeed associated with a significant increase in the likelihood of adopting a stock option/bonus plan (e.g., *Evotec* and *TechnoStart* have offered stock options with increased venture activity), in addition to recruiting new staff. In many of these instances, the goal was to institute substantial and focused performance incentives - usually a system of rewards equalling 15 to 20 percent of the total equity. In some cases, share ownership plans covered the whole organization, but in most other cases incentives were targeted at a company's leading executives.

These results confirm the findings of Fenn, Liang and Prowse (1995) who report that the senior management of portfolio companies frequently own a significant share of the companies' equity. This means that the returns on share ownership potentially represent a sizeable component of senior management's total compensation. The incentive effect may be further heightened by the inclusion of an equity *earn-out* which allows management to increase their holdings if certain performance conditions are met. While senior management may hold ordinary shares, or common stock, private equity firms usually hold convertible preferred shares issued by the portfolio company.

5.5 Leadership's Role in Company Development

The evidence as discussed above shows that private equity firms play a key role in building the internal organization, and specifically the skill development, of the companies they finance – including building operational teams, introducing new management practices such as inventory systems or helping create new management capabilities such as patent systems. An important question is whether venture capital affects the leadership at the very top of the organization. The CEO has the central role in building up all aspects of the company. To begin with, the founders naturally take the leadership position in their own company. While founders may be very suited for the initial phases, not all founders can make the transition from entrepreneur to manager. Our case studies suggest that as companies grow, they tend to bring in an outsider for the position of CEO or CFO (e.g., *Ardana* and *Plastic Logic* appointed a new CEO and CFO, respectively, in the second round of venture finance. A new CEO or CFO was also installed in 33% of the deals studied).

Leadership qualities are demonstrated in the way top managers attempt to create efficiencies by introducing new organizational systems and procedures. *Merlin*

ties portfolio company leadership development to the business drivers. First, it looks at the company's strategy and finds out how executive development will get the portfolio company CEOs and other senior managers to the next stage of development faster. Second, it talks to the unit managers to learn what is working, what is not, and what is missing – examples of learning by doing and learning by experimentation. *Merlin* also helps its portfolio companies articulate the focus and metrics for their executive development programmes. For example, in the case of merger activity, leadership development programme could focus on accelerating the integration of merged companies. *Merlin* believes that executive development can contribute to business success in many ways during a merger.

5.6 Performance Measurement

Increasing number of companies have been measuring employee satisfaction, customer loyalty and other performance areas that are not financial but that they believe affect profitability. For instance, *Care UK*'s ventures have insisted on the company establishing better linkages between strategy and performance measurement system to achieve a better allocation of resources, especially in its investment in training. Although a great deal of subjectivity is involved in measuring what is important to customers, employees, suppliers or other stakeholders, a better understanding of the underlying assumptions could fill the gap between subjective assessments and actual financial returns. These assumptions are primarily related to setting the right performance targets in terms of what is desirable on the part of investors or other stakeholders; for example, *Care UK*'s ventures value long term performance such as growth and stability more than short-run financial gains. The focus of *Care UK* on growth and employee development indicates an area of performance that is of concern to its investors. Performance management also emerges as one of the key factors in the planned or early exit of investors. Nearly 79 percent of the deals from which investors exited on time (or earlier than planned) had well-defined performance evaluation systems, stating clearly the expectations of investors and what was required of portfolio companies in terms of performance achievements.

6 Conclusions

What makes investment funds more or less active investors? The paper uses case study information on private equity funds (and their portfolio companies) to examine investor heterogeneity, and how it affects investment styles. Extant literature suggests that the role of equity capitalists extends beyond that of traditional financial intermediaries like banks, and that investors can play a pivotal role in the development of the companies they finance. One of the central finding of this literature is that human capital is the key determinant of new company development

and growth. The present study examines the hypothesis that private equity funds foster human resource and organizational capabilities in portfolio companies. In particular, the evidence that private equity fund-backed portfolio companies are different from other companies in the way that they develop their human capital base is examined.

Additionally, the study assesses skill utilization and human capital in investor firms along three dimensions: a partner's accumulated experience as venture capitalist, a partner's previous business experience, and a partner's scientific education. It thus builds human capital profile of individual partners responsible for specific deals. All the three dimensions support our contention about the specific role of human capital in investor-investee relations. We have seen evidence that suggests that private equity firms get involved with the development of start-up firms, and that there can be different facets to this involvement. On the one hand, private equity firms frequently concern themselves with providing leadership at the top of the organization. On the other, they are involved in team building and professionalization further down the organization.

There are various ways in which private equity firms may engage with portfolio companies. Busenitza, Fiet, and Moesel (2004) suggest that some common forms of intervention include: (1) being a member of the portfolio company's board; (2) acting as a sounding board for management; (3) making customer and supplier introductions, (4) monitoring operating performance; and (5) assisting with strategic issues. We also find examples of investor influence in the following areas of portfolio company management:

- strategy and performance - including overall strategy, strategy on acquisitions and disposals, new product development and operational performance;
- approach to general management issues such as employee recruitment, compensation, marketing activities, innovation, outsourcing etc; and
- conventional corporate governance, such as compliance with the Combined Code, Directors' remuneration, board succession etc.

Specifically, private equity firms influence the skill acquisition strategies of portfolio companies through recruitment (e.g., making sure the portfolio company has expert individuals in key positions), retention strategies (e.g., employee share options and other incentive schemes) and team-building (e.g. training programmes). Private institutions of venture skill support such as side funds and syndications are also aimed at providing technical and expert support for the skill requirements of portfolio companies. The investor influence in these areas underlines the increasing role of financial institutions in designing and shaping outcomes in many significant areas of company management.

The case study results have several important research implications. For one, this research hopes to bring human capital (of investors) to the forefront of financial behaviour research. Theories of financial structure typically assume homoge-

nous agents, effectively abstracting away from human capital (Hellmann and Puri 2002). Yet, if we take economic and finance researchers' emphasis on the processing of soft information seriously, we recognise that differences in experience and ability are likely to be an important determinant of the process of financial activity and behaviour. We thus hope that our findings will provide a broader impetus for looking at the role of human capital in financial structure and behaviour.

This paper focuses on private equity firms, but future research might want to extend this kind of analysis to other financial transactions too. We examine the hypothesis that private equity funds play a role beyond the traditional roles of financial intermediaries. We provide evidence for the role of investors in the development of portfolio companies. For example, obtaining equity capital is related to a variety of organizational milestones, such as the formulation of human resource policies, the adoption of stock option plans, or the hiring of a vice president or chief financial officer. Future research can examine the effects of these organizational initiatives on the long-term dynamics of investor-investee relationships. Whilst the evidence presented in this paper is insufficient for judging whether a particular economic sector is suffering because its investors are less activist in comparison to those in other economic sectors. It does suggest that there are further benefits to be gleaned from investors being more engaging where they have the expertise to give sound advice to portfolio companies.

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Appendix I: List of Companies Studied

Private Equity Fund Case Studies	**Main Activity (Investment stage)**	**Turnover (2004) in thousands (GBP)**
1. Amadeus Capital Partners	Technology; Early and growth stages	7,304,431
2. 3i PLC	All sectors; all stages	179,602
3. Merlin Biosciences	Biotechnology; early & growth stages	8,110,184
4. Sitka	Technology & Biosciences; early & growth stages	488,839
5. Kleiner Perkins	Technology; early stage	Not available
6. Sequoia Capital	Technology; early stage	Not available
7. The Carlyle Group	All sectors; all stages	287,500,000
8. TechnoStart	Technology & Biosciences; early & growth stages	Not available
Private Equity Fund Portfolio Company Case Studies		
1. Plastic Logic	Technology	Yet to start production
2. Care UK	Health & Social Care Services	136,074
3. Ardana	Biotechnology	89,000
4. iOra	Technology	72,000
5. Primal Pictures	Technology	93,000
6. Blackboard	Technology	114,403
7. Edscha	Supply Chain Management	987,327
8. Evotec OAI	Biotechnology	33,887

International Audit Firms as Strategic Networks – The Evolution of Global Professional Service Firms

Hansrudi Lenz and Marianne L. James[1]

Abstract. The evolution of large international audit firms was driven by client needs and legal regulations specific for the audit industry. The organizational structure of these professional service firms can be characterized as a specific form of a strategic network. The national member firms have to adapt to their different legal, cultural, and economic national environment. In particular, the legal rules in the audit sector establish barriers of entry for foreign competitors and prevent more common forms of market entry, e.g. the acquisition of another audit firm or the establishment of a subsidiary in a foreign country.

Networks of audit firms are a prime example of hybrid governance structures between markets and hierarchies and are organized by contractual relationships between legal and economically autonomous partnership entities from different countries. These networks are controlled by a committee structure. Strategic decisions are made by one or more lead firms.

This article describes the governance structure of international audit firm networks. Furthermore, we analyse how coordination and incentive problems, e.g. hold-up and moral hazard situations are dealt with in these network structures. Exclusive rights, referral work, brand names, network-specific investments, and profit pooling are means to ensure that network members cooperate.

Keywords. Audit firms, strategic networks, professional service firms

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1 Introduction: Accounting Firms as Global Professional Service Networks

The leading international accounting firms describe themselves as global networks of professional service firms providing audit, tax, and advisory services:

"KPMG International … is the coordinating entity for a network of independent member firms that provides audit, tax and advisory services to a wide variety of public and private sector organizations."[2]

"PricewaterhouseCoopers firms come together through their membership of PricewaterhouseCoopers International Limited, a membership based company organised in the United Kingdom. Upon joining the PricewaterhouseCoopers global network and becoming members of PricewaterhouseCoopers International Limited, member firms have the right to use the PricewaterhouseCoopers name and to gain access to common resources, methodologies, knowledge and expertise. In return, they are bound to abide by certain common policies and to maintain the standards of the global network as formulated by the CEO of PricewaterhouseCoopers International Limited and approved by its Global Board."[3]

"BDO International is a world wide network of public accounting firms, called BDO Member Firms, serving international clients. Each BDO Member Firm is an independent legal entity in its own country. Nothing in the arrangements or rules of BDO International shall constitute or imply a partnership between BDO Member Firms."[4]

Despite the offering of a multitude of service lines, the *core service* remains the auditing of financial statements, which is a highly regulated service line in most developed countries. An audit of financial statements enables the auditor to express an opinion whether the financial statements are prepared, in all material respects, in accordance with an applicable financial reporting framework (e.g. International Financial Reporting Standards (IFRS)[5], U.S. Generally Accepted Accounting Principles (US-GAAP)). Audits are a subset of assurance engagements, i.e. engagements in which a practitioner expresses a conclusion designed to enhance the confidence of intended users other than the responsible party, about the outcome of the evaluation or measurement of a subject matter against specific criteria.

The evolution of large international audit firms was driven by the emergence of multinational enterprises, which needed an audit of their foreign operations[6], spe-

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[2] KPMG International (2005, 1).

[3] PricewaterhouseCoopers International (2004, 45).

[4] BDO International (2005, 2).

[5] International Standard on Auditing (ISA) 200.2.

[6] Klaassen/Buisman (2000, 439-444) discuss reasons for the internationalization of audit firms.

cific legal regulations for the audit industry, and cultural factors. Clients of audit firms often have subsidiaries in different countries around the world with different cultural, social, and legal norms and rules, e.g. accounting and tax laws. Therefore, the clients of an audit firm in their home country need audit and consulting services with respect to their subsidiaries abroad. "Generally speaking, especially when multinational enterprises prepare consolidated financial statements, they will need audits of those statements on the basis of rules of the home country of the multinational enterprises."[7]

The organizational form of an international accounting firm is heavily influenced by regulations. In most countries the right to practice as a certified audit firm is granted only to national firms in which locally qualified professionals have majority or full ownership. Therefore, member firms of an accounting network are locally owned and managed. The control of the network members can not be exercised via majority ownership. Furthermore, the detailed national rules concerning corporate law and accounting require a high degree of local knowledge, which creates a natural barrier of entry for foreign audit firms without local knowledge.

The organizational structure of these professional service firms can be characterized as a specific form of a strategic network. The national member firms have to adapt to their different legal, cultural and economic national environment. Especially the legal rules in the audit sector establish barriers of entry for foreign competitors and hinder more common forms of market entry, e.g. the acquisition of another audit firm or the establishment of a subsidiary in a foreign country.

International audit and consulting firms proved to be extremely successful organizations in the last decades, some realizing double-digit growth rates. Today, most middle and large audit firms are members of an international network of independent firms, which enables the support of clients who operate in different countries.[8] For example, the audit of consolidated financial statements requires the cooperation of audit firms and auditors with knowledge of different country-specific cultural and legal rules, accounting and auditing principles. The efficient management of the local and global needs of a multinational client is of crucial importance.[9] One gets an impression of the importance of audit firm networks, if one looks at the largest audit firm networks. During 2004, worldwide fee income of the 15 leading global accounting networks was 80.4 billion dollars and total staff was 619,616 (see Table 1).

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[7] Klaasen and Buisman (2000, 439).

[8] See Fisher (2005).

[9] See for a detailed field study of the linkage between the local and the global under a structuration perspective Barrett et al. (2005).

Table 1. Fee and staff data for leading global accounting networks (Source: IAB, No. 360, 17. Dec. 2004: 9-10; KPMG data: KPMG International 2004 Annual Report; www.kpmg.com).

International network	Fee income 2004 ($ m)	Partners 2004	Professional staff 2004	Total staff 2004
PricewaterhouseCoopers	17,600.0	7,753	88,471	122,471
Deloitte Touche Tohmatsu	16,400.0	7,711	84,364	114,932
Ernst & Young	14,500.0	6,973	70,070	100,601
KPMG	13,400.0	6,448	70,095	93,983
BDO International	3,017.5	2,222	17,690	25,118
Grant Thornton	2,092.0	2,026	14,257	20,486
RSM International	2,088.0	2,140	13,187	20,371
Baker Tilly International	1,815.0	2,199	12,749	18,583
Horwarth International	1,777.0	2,282	13,046	18,776
Moores Rowland Int.	1,735.5	2,113	12,169	19,176
Nexia International	1,608.0	1,614	12,560	15,902
PKF International	1,169.6	1,646	8,387	12,627
Kreston International	1,128.0	1,128	7,447	11,471
HLB International	1,114.0	1,617	7,920	12,060
Moore Stephens Int.	880.2	1,516	8,837	13,059
Total	80,324.8	49,388.0	441,249.0	619,616.0

The purpose of this study is (a) to identify the key determinants of the evolution of international audit firm networks, (b) to characterize their governance structure, and (c) to investigate how coordination and incentive problems (e.g., hold-up and moral hazard situations) are dealt with. Legal regulations specific for the audit and accounting industry seems to be a main factor, which has shaped the organizational form of international audit firms. The study finds that international audit firm networks can be categorized as strategic networks. Exclusive rights, referral work, brand names, network-specific investments and profit pooling are means to ensure that network members cooperate.

Our study contributes to the existing literature in several ways. The prior audit literature, predominantly written by audit practitioners, has addressed the subject of our study primarily in a descriptive manner, whereas until now organizational theorists have not discussed audit firms as a specific and economically important network organization in detail. Thus, we contribute to the existing literature by trying to bridge the gap between audit and organization research. Furthermore, we attempt to provide a full picture of audit firm networks including the identification of potential external and internal factors, which determine the organizational form.

Our study also provides a basis for the development and subsequent tests of hypotheses concerning audit firm networks.

The remainder of the paper is organized as follows. In Section 2 internalization strategies of audit firms are described. Section 3 argues that distinctive features of the audit market influence competition and organizational structure of audit firm networks. Section 4 analyses in detail the organizational structure of global audit firm networks and shows how coordination and inventive problems are solved within the networks. The last section summarises and concludes the study.

2 Internationalization Strategies of Audit Firms

We differentiate between two general modes of service delivery in foreign countries: Going-alone and cooperation (see Fig. 1).

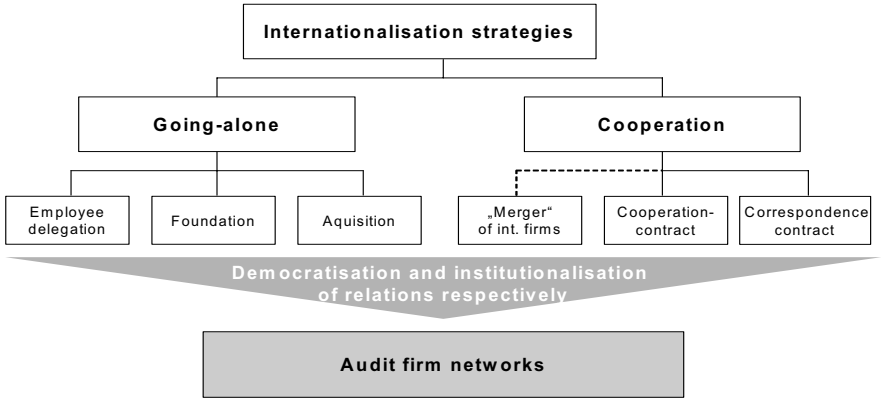


Fig. 1. Evolution of international audit firm networks (Source: Lenz and Schmidt 1999, 116)

A form of a going-alone-strategy is the cross-boarder delivery of services where employees of professional accounting firms located in one country move temporarily to another country (employee delegation). Because of the high costs of the appropriation of local knowledge, of the national accreditation as auditor, and of travelling, in the long run this strategy is inapplicable.[10] A further form is the establishing of a commercial presence in another country in form of a regional office or a (wholly owned) subsidiary (formation of an audit firm) or the acquisition of an existing audit firm (direct foreign investments in audit firms). Well-defined property rights enable directive and control rights and therefore the enforcement

[10] See Havermann (1993a, 173f.), Lanfermann (1995, 381f.); Linden (1989, 336); Lück and Holzer (1981, 2037).

of a worldwide uniform strategy and audit quality. A possible disadvantage is that these strategies are time and cost intensive and many developed audit markets don't allow the majority acquisition of a local audit firm through non-locally licensed audit firms or auditors.

We differentiate between the following basic forms of cooperation between audit firms: Correspondence contracts, cooperation contracts and (as special form) mergers of audit networks on an international level.

Correspondence contracts: Small-sized national audit firms with a small number of international oriented clients agree with audit firms in other countries to represent each other if required. The exclusive or non-exclusive correspondence contract typically does not regulate explicitly audit quality and audit standards. National audit guidelines govern the audits and in each individual case the guidelines are individually agreed upon between the partners of the cooperation. With exclusive correspondence contracts referred foreign work is assigned exclusively to the network firm in the respective country. Non-exclusivity means that multiple network firms are domiciled in a country.[11] Partner meetings at regular intervals, the exchange of employees between network firms and continuous quality controls do not take place. For branding purposes a common international name can be chosen but for the provision of audit services the local name is used. Many small or medium-sized networks utilize this contract form.

Cooperation contracts: These contracts, which regulate the rights and duties of the member firms, e.g. use of the network name, exclusive representation in a specified territory, quality standards, funding, create a stronger institutionalised structure (see Section 4.2 for details).

A separate discussion is needed for *mergers of international networks*. The strategic leaders of two international networks propose a worldwide merger. If the proposal is accepted by the partners of the national member firms a merger of national firms usually follows. On the international level the merger is realized via contractual cooperation agreements whereas on the national level depending on the jurisdiction the purchase or exchange of shares can be used to form a group of audit firms.

The European Commission investigated the merger between Price Waterhouse (PW) and Coopers & Lybrand (C & L) because the European merger regulation required an approval by the Commission. The Commission described the merger as follows: "As both organisations are international networks of national offices, overseen by international bodies, their merger will achieved by a series of transactions and contractual arrangements through which the two networks will be combined worldwide. In practice, the parties will accede to a new integrated structure (the 'Combination Agreement') which will reflect the existing structure of the "PW Combination Agreement'. In practical terms, the PW firms carrying on business in any particular territory will merge with the C & L firms, which carry on business in the same territory. Depending on national laws concerning the provision of audit and accounting services, in some cases integration will be effected by

[11] See Linden (1989, 342f.).

a formal merger of the relevant firms, in other cases by the acquisition by one entity of the business and assets of the other, while in some other cases the firms will be formally dissolved and a new successor firm created."[12]

For example, in Germany the resulting entity PwC Deutsche Revision AG is a non-listed stock corporation whose shares are held by the partners which is the parent entity for 29 subsidiaries. According to German rules the parent company has to present consolidated financial statements for the group. In the UK the parent is PricewaterhouseCoopers LLP with only five principal subsidiary undertakings.[13]

Audit firms as strategic networks historically evolved on the one hand from a democratisation of more hierarchical group-like structures, i.e. subsidiaries were taken over from local audit partners, and on the other hand through an increasing institutionalizing of former more loosely connected relationships such as networks that used mainly correspondence contracts.

We postulate the following testable hypothesis: Going-alone-strategies are more successful in countries with less developed audit markets, which do not regulate the foundation or acquisition of an audit firm. In developed audit markets where regulatory requirements grant the right to practice as an auditor only to national firms in which locally qualified professionals have the majority ownership and control the management we expect to observe forms of cooperation.

Stylized facts are compatible with this hypothesis:[14] Former audit firms Arthur Andersen (AA) and Price Waterhouse (PW) have chosen going-alone strategies. In Europe AA had a market share above 20% in the following countries: Greece, Italy, Portugal and Spain. The five countries with the highest market share of PW were: Ireland (19.6%), Spain (18.6%), Great Britain (15.8%), Portugal (14.8%) and Italy (12.6%). With the exception of Great Britain these are relatively less developed audit markets.

An interesting example of a fast-growing German mid-tier network, which pursues a form of a going-alone strategy, is Rödl & Partner.[15] Rödl & Partner tries to build-up an international network grounded in Germany under a common brand name.[16] At the same time, this firm is a member of another mid-tier network (Rödl & Partner in Germany is member of CPA International Associates). These networks are used in countries where Rödl & Partner itself is currently not represented. Through the future formation of its own global network in such countries there is a potential rivalry between these two networks. Furthermore, audit engagements are only referred to member firms of the CPA International Associates network if Rödl & Partner itself is not represented in a respective country. It can be expected that such a relationship is only possible with a network, which is characterized by loose ties between its member firms.

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[12] European Commission (1999, 28).

[13] PricewaterhouseCoopers LLP, Annual Report for the year ended 30 June 2004.

[14] See Lenz and Schmidt (1999, 117f.).

[15] Another example is Haarmann Hemmelrath. See for details Lenz (2002, 125-127).

[16] See for a short description of Rödl & Partner International Accounting Bulletin, No. 363, 3 March 2005, p. 4.

3 Audit Services, Regulation, Organization Structure and Competition

According to DeAngelo (1981b, 186) the quality of audit services is defined "to be the market-assessed joint probability that a given auditor will both (a) discover a breach in the client's accounting system, and (b) report the breach." The first feature depends on the auditor's technological capabilities (competence); the second feature depends on the auditor's independence from a given client.[17]

Audits of financial statements are services of differing quality, which are offered by audit firms and demanded by markets. Agency costs vary from entity to entity. In general, it is assumed that the higher the agency costs the higher the demand for high-quality audits. An ex ante evaluation of the quality of an audit is not possible. Audit services are experience goods for the members of the supervisory board or an audit committee and trust or credence goods for the shareholders of public companies. This results in the well-known information asymmetry problems between buyers and sellers of audit services. Regulatory authorities try to overcome this problem with mandatory requirements, which shall secure a minimum quality of audit services. The regulation covers the admission and registration of auditors, ethics and independence rules, auditing standards, quality assurance and public oversight about the profession. In the end, the audit profession is one of the most highly regulated professions, at least in developed countries.

An instructive example of regulation is the Eighth Council Directive of the EU. In conformity with this directive most member states have introduced legal requirements that the majority of the voting rights and the majority of the administrative or management body should be only in the hands of statutory auditors or audit firms that are approved in that specific member state. Apparently such rules restrict cross-country competition because an entry barrier is created. A proposal of a new directive seeks to remove such entry barriers and "states very clearly that the majority ownership of an audit firm should be held by statutory auditors or audit firms approved in *any* Member State. This change enhances compatibility with internal market rules and will allow also for the creation of more fully integrated EU audit firms."[18]

What follows from these considerations with respect to the organizational form of audit firms? Differences in language, culture, corporate, business, tax and professional law are a natural barrier of entry for a cross-border foundation of an audit firm from abroad. The acquisition of local knowledge through the purchase of a national audit firm is often not possible, because business or professional laws do not permit the majority acquisition of a foreign audit firm. In some countries only the partnership is a permitted legal form for audit firms, this further restricts the acquisition possibilities and the separation of ownership and control. If the ac-

[17] See also DeAngelo (1981a).

[18] European Commission (2004, 4).

quisition of a foreign audit firm would be possible then the required local knowledge could be bought and the global organizational audit know-how of a parent firm could be transferred to the subsidiary and thereabouts combined with the local knowledge. At the same time the organizational knowledge can be protected via the control rights, which offer the majority ownership. In markets where the mandatory services could not be substituted through other services substitutability on the supplier side is of major importance for the demand side.[19] Then, demanders will get the option to switch to a cheaper foreign supplier of audit services.

To this end, natural and legal barriers lead to separate national audit markets, which are the relevant markets in the audit business and hinder cross-border exchanges of audit services. [20] The existence of international audit firm networks with a cross-border exchange of employees keeps this in effect unchanged because ultimately the activities are controlled by the local partners. Without these restrictions of cross-border competition eventually more integrated audit firm organizations with minor organization and control costs and better funding options would have evolved. In the related consulting business some suppliers are organized as hierarchical international groups, e.g. Computer Sciences Corporation CSC, EDS, Gemini Consulting, IBM Consulting, AT Kearny.

4 Strategic Global Accounting Firm Networks

4.1 Strategic Networks – A Working Definition

National and international networks are medium- to long-term, contractual forms of a co-operation between legally and economically autonomous entities for the joint task fulfilment. It is the aim of the cooperation to reach comparative advantages with respect to competitors, which are not members of the network through an efficient cooperation between network members.[21] The activities of the member firms are directed towards higher profitability. Sydow (1993, 82) characterizes a strategic network as "a polycentrical organization structure of economic activities between markets and hierarchies, aiming at the realization of competitive advantages, which is nevertheless strategically guided by one or more lead firms. The organizational structure is characterized by complex-reciprocal, more cooperative then competitive and relative stable relationships between legal autonomous, however economically mostly dependant firms." Most networks are lead strategically by one or more so-called hub firms. Networks try to combine competitive market features like a high degree of specialization and pressure to seek efficient solutions with more cooperative features like trust and information integration, which are

[19] See Ridyard de Bolle (1992, 34f.); Lenz (1998, 191).

[20] See European Commission (1996, 293-295); Buijink et al. (1996, 113-135); Maijor et al. (1996).

[21] See Sydow (1993, 96); Jarillo (1988); Gulati et al. (2000).

used to coordinate network activities.[22] Therefore, strategic networks are a hybrid organization form between markets and hierarchies.[23]

In our view, strategic networks in the audit sector have been developed, because on the one hand the competitive pressure has favoured the specialization on country-specific competencies and on the other hand regulatory measures up to now have prevented the choice of a more hierarchical organization form. A further main advantage of a network organization in the audit business is that it protects each member firm from liability risk resulting from deficient behaviour of other network firms. Because audit firms, depending on the respective jurisdiction, operate in a very litigious environment, this is a main argument in favour of the network organization. It should be kept in mind that due to the partnership form of audit firms in many countries the stakes are high for the partners.

4.2 Basic Features of Strategic Audit Firm Networks

The network organization

We define a contractual cooperation between legally and economically autonomous national audit firms, which are organized based on partnership principles under the strategic leadership of one or more member firms for the joint fulfilment of international client needs, as a strategic audit firm network (see Figure 2).

Legal autonomy means that each member firm in the network preserves his own legal status depending on the specific jurisdiction in which the firm operates. The national audit firms accept contracts independently and collect their own revenues.[24] The main argument in favour of a legally autonomous status of the member firms are the above-mentioned protection from liability risks which otherwise could put at risk the whole network and wealth of the partners. The disclaimer in the fine print of each brochure of global accounting networks makes this very clear. We use an elaborate recent example from KPMG's Transparency Report:

"KPMG International is a Swiss cooperative that serves as a coordinating entity for a network of independent firms operating under the KPMG name. KPMG International provides no audit or other client services. Such services are provided solely by member firms of KPMG International (including sublicensees and subsidiaries) in their respective geographic areas. KPMG International and its member firms are legally distinct and separate entities. They are not and nothing contained herein shall be construed to place these entities in the relationship of parents, subsidiaries, agents, partners, or joint venturers. No member firm has any authority (actual, apparent, implied or otherwise) to obligate or bind KPMG International or any other member firm, nor does KPMG International have any such authority to obligate or bind any member firm, in any manner whatsoever."

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[22] See Siebert (1991).

[23] See Hakansson and Lind (2004, 52-54).

[24] See Zeiss (1993, 54); Niehus (1992, 1061, 1063).

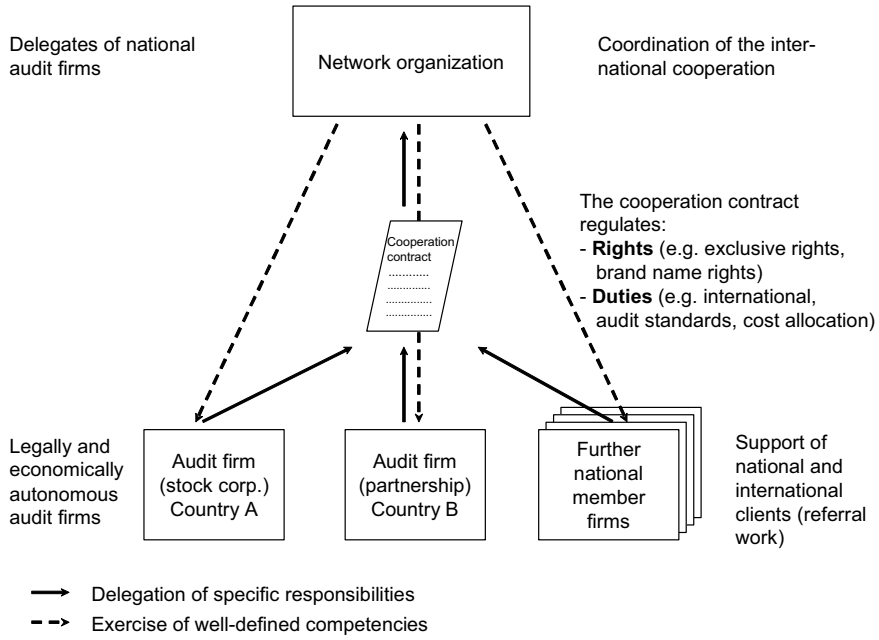

Delegates of national audit firms
Network organization
Coordination of the inter-national cooperation
Cooperation contract
The cooperation contract regulates:
- Rights (e.g. exclusive rights, brand name rights)
- Duties (e.g. international, audit standards, cost allocation)
Legally and economically autonomous audit firms
Audit firm (stock corp.) Country A
Audit firm (partnership) Country B
Further national member firms
Support of national and international clients (referral work)
Delegation of specific responsibilities
Exercise of well-defined competencies

Fig. 2. Role of the cooperation contract within audit firm networks (Source: modified from Ziegler 1994, 8)

It should be noted that there is an apparent contradiction between the image of a global integrated accounting firm who delivers seamless services around the globe and the above-cited description in the fine print. A balanced trade-off between integration and autonomy has to be reached within each network.

Economical autonomy means that strategic decisions have to be made independently, e.g. national member firms decide autonomously without coercion about entry to and exit from a network. Network membership can be terminated from both sides, i.e. the member and the network. This is a marked difference between a network and a group whereby one entity takes control (as defined in IAS 27.4) of another entity mostly through the acquisition of a majority of the voting rights. This enables the acquirer to govern the financial and operating policies of the other enterprise so as to obtain benefits from its activities. International audit firm networks are not based on shareholdings between member firms and there is no entity, which has a significant influence as it is defined in IAS 28.2, on the member firm. Therefore, generally an audit firm network cannot be understood as a single economic entity.

In the cooperation contract the national audit firms transfer voluntarily specific rights to the international organization to assure an efficient international cooperation. So, there is a certain abandonment of autonomy. The intensity of the relationship between member firm and network varies. In audit firm networks the member

firms give up their autonomy only insofar as the support of international clients is concerned.[25]

The cooperation contract specifies the following *duties* for the member firms:

- To consider the worldwide quality standards and admittance of quality reviews;
- To consider strategic aims including a worldwide corporate identity, e.g. the use of a joint name;
- Refer foreign audit work to member firms of the network in the specific country, i.e., normally a member firm has the exclusive right to operate in a specific geographic area or country;
- To act upon the client to engage foreign cooperation partners which are network members (best-effort-clause);
- To finance the network through an allocation of costs.

The cooperation contract specifies the following *rights* for the member firms:

- To use the international name;
- To use joint resources and know-how, e.g. specialized employees, audit manuals, databases and audit software;
- To deliver client services in national markets exclusively;
- To make own decisions with respect to the local market.

Details about contractual specifications of rights and duties are not publicly available.[26] In general, the audit firms emphasize in their brochures and annual reports their independence and autonomy.

Economically, the degree of dependence on the international network depends on the net present value of the stream of future additional income (revenues less marginal costs), which is generated through network membership. In principal, it is possible for a national audit firm to change to another international network. This limits the dependence from a specific network. However, for members of larger networks this is not always a viable alternative because normally the new network also has a member firm in the country and the change to another network would imply a national merger between the old and new member firm. Basically, there is a mutual dependency between network firms, because an audit firm has inward and outward engagements. The audit firm gets engagements from other member firms and it transfers engagements to other member firms. There is a symbiotic interdependency between the firms.[27]

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[25] See Mandler (1995, 32, 36); Havermann (1993a, 177f.); Niehus (1992, 1064).

[26] Some information is given in the recent KPMG's Transparency Report from March 2005. See also Deloitte Touche Tohmatsu (2004, 26-28).

[27] See Picot et al. (1996, 263ff.); Sydow (1993, 92).

Networks can be differentiated according to their degree of integration in networks with weak, middle and high degrees of integration (see Figure 3). The higher the degree of integration, the more autonomy is given up by the members. Ties between members can be created by high exit fees, material referrals, network-specific investments, e.g. a high degree of systems integration. The willingness to give up autonomy depends on the degree of revenues, which are referred from other network firms. Revenues from referred work can be used as a proxy for the unobservable stream of additional rents from referred work: The higher the network-specific revenues in relation to total revenues, the higher the willingness to give up autonomous decision rights. Unfortunately, no data is available about the percentage of referred work in relation to revenues.

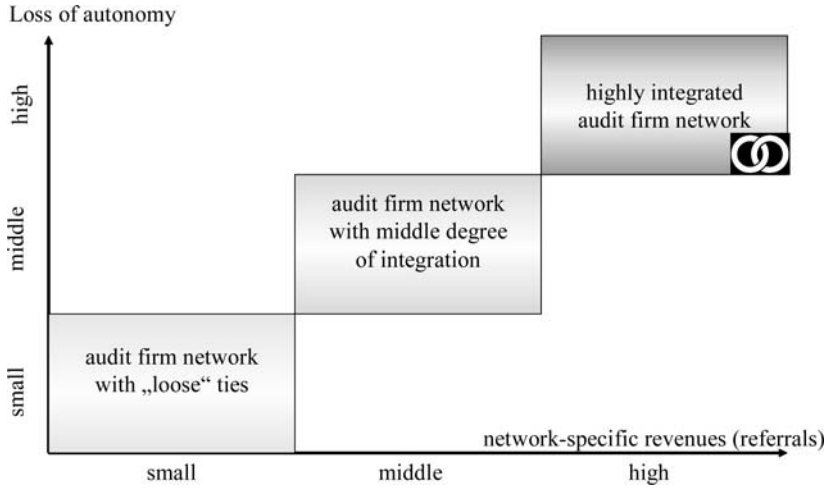


Fig. 3. Degree of integration in audit firm networks

Another factor that determines the degree of economic autonomy of the national member firms is the design of the network organization. In principle, audit firm networks are decentralized organizations.[28] National engagements and engagements referred from network firms are served autonomously by national member firms whereas the lead auditor or lead partner takes on a coordinating function; but this does not mean he is entitled to issue instructions for member firms abroad. The dependency between network members and the network at first refers to collective decisions like decisions about quality standards, which all member firms have to obey. These decisions are negotiated in coordination committees. The network organization itself does not provide services to clients. The organization

[28] See Lück and Holzer (1981, 2037), Havermann (1993a, 52), Nelissen (1995, 527), Sieben and Russ (1992, 1324).

takes care of the evolution of international strategies and their implication in the member firms. She takes on the role of a meta-coordinator or information broker within the network.[29]

However, it should be emphasized that the European Commission in connection with the merger between Price Waterhouse and Coopers & Lybrand, which was investigated by the Commission had noted that the member firms of Price Waterhouse "function collectively as a single economic unit."[30] For this firm a "significant degree of integration" was stated.

International audit firm networks coordinate their activities through committee structures. They are based on the delegation of delegates from national member firms into diverse committees. The following Figure 4 is based on a stylized description (framework) of a network structure and shows the committee structure in general. The framework can be used to organize descriptions of various existing networks.

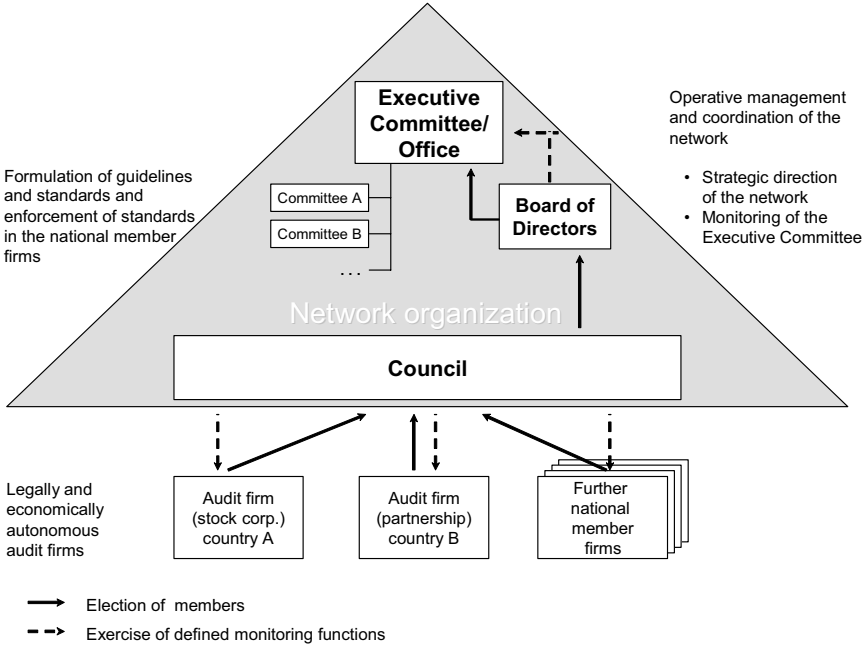

Executive Committee/ Office
Operative management and coordination of the network
Formulation of guidelines and standards and enforcement of standards in the national member firms
Committee A
Committee B
...
Board of Directors
• Strategic direction of the network
• Monitoring of the Executive Committee
Network organization
Council
Legally and economically autonomous audit firms
Audit firm (stock corp.) country A
Audit firm (partnership) country B
Further national member firms
Election of members
Exercise of defined monitoring functions

Fig. 4. Global audit firm network organization (Source: Lenz and Schmidt 1999, 129)

[29] See Sieber (1991, 307).

[30] See European Commission (1999, 29).

Common legal forms of a network organization are a Swiss cooperative (e.g. KPMG), a Swiss association (Verein, e.g. Deloitte Touche Tohmatsu) or a British (Private) Company Limited by Guarantee (e.g. PricewaterhouseCoopers).[31]

Generally speaking, all full member firms are represented in the *Council*. The Council elects the members of the Board of Directors, the leading organ of the network. The Board determines the strategic aims, decides over the admission and exclusion of member firms and formulates professional standards for the global services. Furthermore, the Board elects the members of the Executive Committee and monitors the activities of the Executive Board.

For example, at KPMG[32] the International Council consists of the International Chairman, together with the Senior Partners of the largest 25 member firms and 12 additional Council members being nominated by the International Board and the International Council on the recommendation of the International Chairman. According to KPMG (2005, 3) the role of the Council "is to approve common goals and direction, and significant policies to appropriately develop, govern and manage the international organization. The International Council also approves certain membership matters, the annual international budget and other significant financial decisions as well as recommending the annual financial statements of KPMG International for approval by the General Meeting." Also, the Council nominates additional members for the Board.

The Executive Board leads the Executive Office, which organizes the operative day-to-day activities. It coordinates the cooperation between member firms and enforces the decisions of the Board of Directors and is responsible for the whole management of the network.[33] The Executive Board makes available the resources for all international activities, assists, und steers the committees and project groups, which develop the network standards and methodologies, and assists and controls the national member firms who implement the network standards and policies.[34] The Executive Board analyzes the member firms and gives recommendations concerning potential new members. In most audit networks the Executive Board and the Executive Office have a strong position inside the network.[35]

Example KPMG:[36] The International Board at KPMG comprises of up to twenty members, made up of representatives from the seven largest member firms (by revenue), including the KPMG International Chairman. The remaining members are made up of the CEO and representatives of up to twelve other member firms, nominated by the International Board and the International Council on the recommendation of the KPMG International Chairman. Members of the Board, with the exception of the Chairman and the CEO, are appointed for renewable

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[31] See for a detailed description of these legal forms Hachmeister (2001, 229-236).

[32] See for he following KPMG (2005, 3).

[33] See Ziegler (1994, 394).

[34] See Linden (1989, 345).

[35] See Mandler (1994, 181); Niehus (1992, 1066).

[36] See KPMG (2004, 2-4).

terms of two years. The Board has an overall mandate to review and endorse the policies regulations at KPMG and monitor their implementation.

Example Deloitte Touche Tohmatsu (DTT):[37] The Board of Directors at DTT is comprised of 33 members and it is the highest global governing body. Members of the Board are appointed by individual member firms that are themselves selected based on size, revenues, and number of multinational clients. The Board also includes five regional seats, ensuring that smaller member firms are represented. Once elected, a member can serve up to a four-year term. The Board is served by the Governance Body, which has oversight responsibility for the organization's management. The Governance Committee has equal representation of DTT's 13 largest member firms. Each Committee member has one vote on matters considered by the Committee. The Board has also a number of subcommittees that coordinate and recommend actions on a wide scope of financial and administrative issues within the context of the global organization.

To sum up, despite economically autonomous entities there are a lot of interdependent ties between national audit firms. The network organisation is a meta-coordinator who shall organize an effective cooperation between national audit firms. Usually, a committee structure is established which restricts the autonomy of the national firms in specific well-defined areas. In more integrated Big 4 networks like KPMG or Deloitte the largest member firms clearly take on a dominant position in the governance structure.

Strategic Leadership

A strategic network is led strategically by one or more central firms.[38] In audit firm networks the leading firms are the firms who operate in the significant audit markets, e.g. the U.S. or the British audit market. These firms have the highest turnover and dominate other firms via their economic importance. As shown above, strategic leaders have more seats on the Board of Directors or on the committees. Certain positions, e.g. the chair of the Executive Board, may be reserved for the strategic leader, as it was the case by the former C&L-network.[39] Strategic leaders can gain an advantage over other firms because their predominant resources used to fulfil joint projects. Regularly, the audit manuals and audit software is developed by the leading firm in the network.[40] Strategic leaders gain a powerful position within the network through the setting of network guidelines, which transfers the pressure to adapt to the other network members.

In the Big 5 (now Big 4) networks the influence of the strategic leaders, mainly U.S. or U.K. firms, is based upon their economic importance in conjunction with technology and know-how advantages.[41]

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[37] Deloitte Touche Tohmatsu (2004, 27).

[38] See Sydow (1993, 81); Jarillo (1988, 32); Gilroy (1993, 33).

[39] See Speechly (1994, 10).

[40] See Niehus (1992, 1065).

[41] See for details Lenz (1999, 131).

Specialization and Pressure from Competition

Specialisation and market pressure that assures efficiency are important success factors for networks. In audit firm networks specialisation is comprised of country-specific know-how about language, culture, and legal systems (corporate, tax and accounting laws), which is crucial for audit and related advisory services. Some member firms are specialized in branches, e.g. financial services, or specific services, e.g. legal services. These specializations can be used in the whole network. Specialization benefits are supplemented by market pressure created through the comparison with national competitors because each member firm acts as an independent and autonomous entity on its relevant national market. Whereas the member firms in larger networks possess the exclusive right to represent a network on the national markets this does not necessarily mean that competition is restricted because henceforth competition takes place between networks.[42] The individual audit firms compete on national markets with members of rival networks. This permanent evaluation of network relations can assure the efficiency of the network, because the individual member firm can calculate, whether the membership is still rewarding or whether a change to another network would be more worthwhile. Otherwise, the network organization can evaluate if existing relationships must be improved or whether individual firms must be replaced by more effective firms. So, within networks competition supports efficiency and innovation.

The permanent evaluation of network relationships und the opportunity to arrange more advantageous network arrangements enables an efficient cooperation in the network, because each network is forced to optimise its relations to hinder the potential loss of members. However, the change of network membership requires often a merger between the previous and the new member firms in the respective country. If there are differences in organization and partner profitability this is not always possible without frictions.

Mechanism to Manage Coordination and Cooperation Problems in Audit Firm Networks

Which institutional arrangements and reciprocal obligations help audit firm networks to organize efficient cross-border coordination and cooperation and to protect the network against opportunistic actions of individual firms (free rider problem)? Coordination means the coordination, which is necessary if there is a high degree of division of labour. Thereby we assume no conflicts of interest between the parties are present. In contrast, motivation and incentive problems are caused mainly by conflicts of interest between principal and agent (agency problems), e.g. between a lead auditor and a foreign member firm. Table 2 gives an overview about possible coordination instruments in international audit firm networks.

[42] See Thorelli (1986, 46); Semmlinger (1993, 340).

Table 2. Coordination instruments in audit firm networks (Source: Hachmeister 2001, 247)

Personnel coordination instruments	Mutual exchange of employees, personnel communication networks which enable an informal exchange of information, e.g. regular partner meetings
Organizational coordination instruments	Network vision and joint network culture, cooperative formulation of common strategies, committee structure, design of the central office, installation of a reporting system, clear assignment of tasks and competencies via a lead partner system
Technical coordination instruments	Harmonized IT- and management systems, audit guidelines and tools

Hachmeister (2001, 249) describes three basic incentive and motivation problems:

1. If a new member firm is admitted to the network, both sides have to check if each side has the adequate resources and competences at their disposal (signalling and screening).
2. After the admission of a member firm the network has to be assured that each network member adheres to the agreed quality standards, otherwise the reputation of the whole network is at stake (moral hazard risk).
3. Value and cost of the network membership has to be traded off. The usually ex ante incomplete contracts must not be interpreted ex post in a way which favours one side unfairly (hold-up risk).

The following Table 3 shows hypothesized incentives for some contractual arrangements used in audit firm networks, which shall attenuate moral hazard and hold-up risks.

Exclusive rights and referrals: Exclusive rights hinder mutual competition within the network. If an audit firm waives the right to carry on business in a foreign country a typical bilateral situation of mutual dependency is created. This arrangement avoids conflicts of interests and restricts opportunistic behaviour. For example: The German auditor of a group in Germany needs for the audit of the U.S. subsidiary of this group the services of an U.S. network member. Similarly, the U.S. auditor who audits a U.S. group with a subsidiary in Germany must have trust in the services of the German network member. Both parties know that they have to rely on each other's quality at the next audit and will avoid falling below the agreed-upon quality standards.

Network-specific investments: Opportunistic behaviour can be restricted through network-specific investments which are lost if an opportunistic member firm must leave the network. Network-specific investments like the costs for central training facilities, branding costs, formulation of audit guidelines or the development of audit tools are sunk costs. High investments into the international quality assurance

Table 3. Institutional arrangements of audit firm networks and incentive effects (Source: Hachmeister 2001, 259f.)

Contractual arrangements	Incentives for network- compliant behaviour (moral hazard)	Dependence with reference to an individual firm (hold-up)	Dependence with reference to the whole network (hold-up)
Exclusive rights	Eases the control of the contract parties (scale effects of monitoring)	Strengthens the position of the exclusive member firm in a specific country	Dependence of an exclusive single member firm
Referrals	Incentives for monitoring	Leads to mutual dependence between network members	
National branding name (reputation)	Emphasizes the autonomy of the members, weak incentives for monitoring and for investments into the network	Strengthens the position of the member firm	Weakens the position of the network
International branding name (reputation)	Self-binding with respect to clients, incentives for monitoring and network-specific investments	Weakens the position of the member firm	Strengthens the position of the network
Network-specific investments in audit tools and education/training	Self-binding with respect to clients and monitoring incentives	Mutual dependency between network members	
Profit-pooling	Strengthens network-compliant behaviour, profit-pooling leads to common interests	Mutual dependency between network members	
Lead partner for specific clients	Eases the control of member firms	Weakens the position of an individual member firm	Strengthens the position of the network

are investments into long-term relations, which protect against quality deceit. Clients and network members know that these investments are lost if an auditor opportunistically tries to break agreed-upon quality standards.[43] According to Thorelli (1986, 39) information integration is one aim of a network. Information integration, e.g. common audit technology and IT-systems, makes joint knowledge available.[44] Long-term relations ease the exchange of knowledge because the value of information can be evaluated. Furthermore, information integration causes additional ties in the network which reinforce the long-term relations.

Brand name, reputation: A high reputation enables the realization of price premiums and additional engagements. It takes a long time to build up a reputation but reputation of a firm or a network may easily be destroyed by misconducts of only a few employees.[45] The collapse of the worldwide Andersen audit network after the Enron accounting scandal is an instructive example. The efficiency of the reputation mechanism indeed assumes a high market transparency, i.e. the detection probability must be high enough.[46] Without many costs reputation may be transferred via branding on network member firms. It must be kept in mind that this goodwill spill-over may be effective in the opposite direction, too. If a network member firm acts inappropriately the reputation of the whole network may be damaged. In the face of these risks the network will consider a symmetric allocation of the investments to hinder a one-sided expropriation of benefits. For example, only firms with a comparable reputation in their home country may be accepted as new members because this puts a comparable reputation at stake in case of deficient audits.[47]

4.3 Risks of Global Audit Firm Networks

A network organization carries substantial risks, which can threaten the existence and evolution of networks. We identify the following risks:

If networks are characterized by very loose ties the system can only partially be controlled (*partial systems controllability*).[48] In this case the network firms primarily intend to strengthen their own position at the cost of the whole network. A further problem is the *loss of identity,* which may follow if a member firm adapts a strong network culture.[49] Important national features, which are advantageous in the local

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[43] See Jarillo (1988, 37); Meyer (1995, 153); Gilroy (1993, 140); Gemünden and Heydebreck (1994, 266f.).

[44] See Semmlinger (1993, 338); Gilroy (1993, 31f.).

[45] See Gilroy (1993, 155); Mandler (1995, 37); Marten (1994, 153).

[46] See for an overview about empirical studies Moizer (1997).

[47] See Mandler (1995, 36); Havermann (1989, 110).

[48] See Sydow (1993, 275).

[49] See Meyer (1995, 160).

market, may disappear. In the former audit network KMG (Klynveld Main Goerdeler) the national identities were so strong that sometimes the appearance under a common name was problematic for some firms.[50] The openness of networks enables firms to leave the network if better relations are available (*instability through exits*). This may weaken the network if an important member firm in a country leaves. BDO Binder experienced a strong set-back on the important British audit market as the foundation member Binder Hamlyn changed in 1994 to Arthur Andersen. Prior to this, BDO had lost its foundation member in the Netherlands Dijker & Doornbos to another network.[51] Since clients change the networks with the departing audit firm, member firms in other countries loose clients because clients, i.e. subsidiaries of the parent company who was audited by the leaving firm, prefer to work worldwide with a single network of audit firms. A further threat is the *loss of competence* of the national member firms if there are strong strategic leaders in a network. If the hub-firms occupy the central positions in the network they determine the further development of the profession and the design of network guidelines and audit tools. The new audit approach of the KPMG audit network is clearly stamped by the U.S. member firm.[52] The increasing significance of international accounting and auditing standards leads to a relative debasement of country-specific knowledge and is favourable for Anglo-Saxon member firms. Previously, we already have mentioned negative reputation effects, which are a risk for the whole network (*reputation risks*). The more different the cultures and techniques, the larger the number of member firms, the higher the *coordination costs* for the network.[53]

Audit firm networks describe themselves as global professional service firms, which deliver a broad range of services to their clients. However, incentive-incompatible regulations in the audit business create a problem for audit firm networks. In some jurisdictions, consultants who bring in a substantial portion of revenues are not allowed to take over a management position in an audit firm.[54] Independence requirements have severely restricted the delivery of non-audit services in many countries. This makes the joint delivery of professional services from a single supplier less attractive than before.

5 Summary

The evolution of large international audit firms was driven by client needs and legal regulations specific for the audit industry. The organizational structure of these professional service firms can be characterized as a specific form of a strategic

[50] See Stevens (1985, 54f.).

[51] See Post et al. (1998, 701f.); Otte (2002 , 128-134, 154-158).

[52] See Bell et al. (1997).

[53] See Havermann (1993b, 58).

[54] See for example § 28 WPO (German Public Accountant Act); see also Havermann (1998, 418).

network. The national member firms have to adapt to their different legal, cultural and economic national environment. In particular, the legal rules in the audit sector establish barriers of entry for foreign competitors and prevent more common forms of market entry, e.g. the acquisition of another audit firm or the establishment of a subsidiary in a foreign country.

Networks of audit firms are a prime example of hybrid governance structures between markets and hierarchies and are organized by contractual relations between legal and economically autonomous partnership entities from different countries. The networks are controlled by a committee structure. Strategic decisions are made by one or more lead firms.

This paper describes the governance structure of international audit firm networks. Furthermore, we analyze how coordination and incentive problems, e.g. hold-up and moral hazard situations are dealt with in these network structures. Exclusive rights, referral work, brand names, network-specific investments and profit pooling are means to ensure that network members cooperate.

The future will bring a greater transparency with respect to audit firm networks. The proposal for an 8th Directive requires as a special provision for the statutory audit of public interest entities a publicly available transparency report. The annual transparency report should include amongst other things the following (Article 38): a description of the legal structure and ownership; where the audit firm belongs to a network, a description of the network and the legal and structural arrangements in the network, a statement on the governance structure of the audit firm, financial information and information about the basis for partner remuneration.

This additional information will give researchers an opportunity to gain further insights into the structure of audit firm networks and into the degree of network integration and enables them to formulate and to test hypotheses, e.g. about the correlation between network-specific revenues and the degree of integration (see Fig. 3) or between the degree of integration and cooperation-ensuring instruments (see Table 3). Furthermore, future research should explore in more detail the mix of safeguards in place ensuring cooperation within networks of differing degrees of member autonomy. Our research provides a basis for empirical research into these issues by organizational and auditing theorists.

Regulators likely will be interested in this research because independence rules cover not only auditors and audit firms but also the *network* to which a statutory auditor or an audit firm belongs (Art. 23 8th Directive of the European Union). Article 2, Point 5, of the new 8th Directive defines network as follows:[55]

"Network" means the larger structure:

[55] European Parliament legislative resolution on the proposal for a directive of the European Parliament and of the Council on statutory audit of annual accounts and consolidated accounts and amending Council Directives 78/660/EEC and 83/349/EEC (COM(2004)0177 – C6-0005/2004 – 2004/0065(COD)), 28 September 2005.

- which is aimed at cooperation to which a statutory auditor or an audit firm belongs, and
- which is clearly aimed at profit or cost sharing or shares common ownership, control or management, common quality control policies and procedures, a common business strategy, the use of a common brand-name, or a significant part of professional resources.

This definition is broad and uses some vague terms, which must be interpreted by audit firms and regulators in the member states of the European Union. Further economic research is needed to operationalize these terms and to develop a measurable taxonomy of network integration. Thereafter, it would be possible to discuss what degree of integration of the common interests between network members would make it necessary to also apply independence rules to network members.

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International Joint Venture Performance: Impact of Performance Measures and Foreign Parent, Target Country and Investment Specific Variables on Performance

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Abstract. The past three decades have witnessed a growing theoretical and managerial interest in international joint ventures (IJVs). Of growing interest has especially been the analysis of IJV performance. The previous studies have indicated very varying results about IJV performance and determinants of IJV performance. Fourteen hypotheses of the impact of foreign parent, target country, and investment strategy specific variables on performance were developed and tested. In a central role in the study was also the question do the results depend on the measure of performance? As the measures of performance were selected: longevity, survival, and stability. The empirical part of the paper is based on over 720 IJVs made by Finnish firms. The most significant variables were the international experience and the degree of diversification of the Finnish firms, unit unrelatedness, and the individualism dimension of culture. The results indicated relatively much differences depending on measure of performance.

Keywords. International joint venture, performance, longevity, survival, stability

1 Introduction

The past three decades have been characterised by a multiplication of studies focusing on the subject of international joint ventures (IJVs) and alliances. Behind the great interest towards IJVs and other forms of co-operation arrangements by academians and managers are : 1) the increasing use of collaborative arrangements by companies and various public organizations, and 2) the relatively high failure rate of various types of collaborative arrangements. Performance in IJVs has been

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of great interest during the last 30 years among researchers (Robson et al. 2002; Reus and Ritchie 2004). Some studies indicate that most of the firms have succeeded at least rather well in their IJVs and alliances (see e.g. Beamish 1993; Lee and Beamish 1995; Makino 1995). However, some studies indicate as high failure/instability rates as 50% or even over two-thirds (Harrigan 1988; Park and Russo 1996; Hennart et al. 1999). It seems that the results are depending at least for some degree on the measure of performance. Additional interest towards further analysis of the IJV performance gives the fact that the results about the influence of various variables on IJV performance have been rather mixed. Most of the IJV performance studies have been based on rather small samples (less than 200 cases) and they have focused on IJVs made in one single country (e.g. in China) or on some specific area (e.g. in Asian countries)(for more specific details see e.g. Robson et al. 2002). Therefore there has been a limitation of the possibilities for making more comprehensive analysis and comparisons concerning the impact of various IJV location/target country specific variables.

This paper aims to give additional evidence of relations between selected foreign parent firm, target country, and investment strategy related variables and IJV performance. An additional goal is to analyze whether there is variation in the results depending on the measure of performance. As the measures of performance will be selected longevity, survival and stability, because all of them can be regarded as key features of IJV performance and all of them have also been used in several earlier studies.

The empirical part of the paper will be based on a sample of over 700 IJVs established by more than 130 Finnish companies in over 60 foreign countries during period 1970-2001. The study is the first large scale study focusing on IJV performance of firms originating from any of the Nordic countries (sample size over 250 cases). In this study the term IJV refers to an unit which has at least two parents, and from which at least one has its headquarter outside the country where the unit is located in. The unit may have been established as a greenfield investment or the IJV may be a partial acquisition of a local unit. The share of the foreign partner in the IJV must be between 10 and 94% (commonly used limits for an IJV). Finally, the focus in the paper is on IJVs having manufacturing operations. Thus, IJVs in service sector and IJVs between firms in manufacturing sector which concentrate e.g. only on sales or R&D operations are excluded. The focus in the paper is the viewpoint of the foreign partner in the IJV.

The structure of the paper is as follows. In the second section an overview of performance measures is made. In the third section the relations between various variables and IJV performance are discussed. The third section includes also development of hypotheses for the empirical part of the paper. In section four the sample selection, operationalization of variables used and key methodological issues in the study are discussed. Section five includes the presentation and analysis of the results. Section six includes a summary and conclusions based on the study made.

2 Measurement of IJV Performance

A major difficulty in evaluating the success of IJVs is due to the definition and the measures of performance. Academians have used numerous measures of IJV performance, many of which are conceptually ill-founded and have *prima facie* caused inconsistency in empirical findings (Geringer and Hebert 1991, Olk 1997, Yan and Zeng 1999, Robson et al. 2002). In several studies only one criteria for IJV performance has been used, but great variation exists regarding the type of performance being evaluated and the criteria used. The evaluation can be directed towards either the performance of the operation itself (JVPERF) or towards the performance of the partners (PARTPERF) (i.e. how the IJV characteristics influence the partner(s) performance). Furthermore, the evaluation can be realized using subjective or objective measures or a combination of both types of performance measures (Blanchot and Mayerhofer 1997).

A review of empirical IJV studies (Robson et al. 2002; Larimo 2001) indicates that an overwhelming majority of proxies identified in the literature correspond to JVPERF. Only a few studies assess PARTPERF. Objective measures of JVPERF have included longevity, survival, stability, combination of longevity/survival and stability, and varius types of business indicators (e.g. profitability, market share etc.). As subjective measures have been used various items assessed by partner firm(s), various items assessed by IJV general manager, or a combination of them. Furthermore, also different kind of combinations of objective and subjective measures have been used. All the measures have their own strengths and weaknesses. In this study the evaluation will be directed towards the JVPERF and we will focus on three measures:survival, stability, and longevity.

Survival has usually been accepted as a good indicator of performance. A divestment is usually regarded as an indicator that the unit has not reached the goals set for it or that the unit has clearly been a failure. This is not necessarily the case (Yan and Zeng 1999). However, results in several studies (Beamish 1985; Pope 2003) reveal that most of the ventures that have ceased operations did so because they failed. Also in a rather recent study by Glaister and Buckley (1998) a high correlation was found between survival and subjective measures of IJV performance (see also Geringer and Hebert 1991). Stability is another commonly used measure for IJV performance. Stability increases internal harmony and trust between partners. Only if it is clearly evident that the inputs of partners do not equal the desired inputs of the partners´ and they agree about this, a rapid change in the ownership distribution is understandable. Another exception includes cases where the change was planned already at the time of the establishment of the IJV (for a good review related to the concept and use of instability as the measure of IJV performance, see Yan and Zeng 1999). In this study instability includes both divestments and greater changes in the ownership distribution. A third commonly referred measure for IJV and alliance performance is longevity. A very common view is that most IJVs are not intended to be short lived but to last for a longer time period. Intended time periods of ten years or even more are relatively common in IJV agreements. Therefore,

the longevity of the unit is regarded to be a good indicator of performance. These three variables are also the three most frequently cited objective measures of performance in the IJV literature (see e.g. Yan and Zeng 1999).

3 Relations Between Various Variables and IJV Performance

In a review of 95 empirical studies focusing on IJV performance by Robson et al. (2002) 120 determinants and ten approaches to to IJV performance assessment were found. When variables were examined for overlaps and evaluated based on their theoretical and practical meaning, the figures were decreased to 74 determinants and seven performance measurement approaches. The determinants could be categorized into: 1. intrapartner characteristics, 2. interpartner fit, 3. venture demographics, 4. contractual elements, 5. control and supervision, 6. project-specific relational aspects, 7. organizational learning, 8. R&D and technology, 9. marketing, 10. human resources, 11. industry characteristics, and 12. regulatory environment. Several of the categories demand survey and/or interview based information. This is one reason why only seven of the 74 variables have been used in at least 10 IJV studies. Furthermore, the review revealed that the results have been rather mixed and the results have partly depended on the specific performance measure used (financial, stability, or multidimensional performance). Thus additional analysis is definitely needed related to the relations between different variables and IJV performance.

Table 1. Variables selected to the present study

Foreign parent specific variables
Size of the parent
Degree of diversification of the parent
International experience of the parent
Target country specific experience of the parent
Target country specific variables
Economic level of the target country
Economic growth of the target country
Political instability of the target country
Cultural distance to the target country
Degree of uncertainty in the target country
Degree of masculinity in the target country
Degree of power distance in the target country
Degree of individualism in the target country
Investment specific variables
Unit unrelatedness to the foreign parent
R&D intensity of the field of industry
Ownership structure
Form of establishment

For this study 16 variables were selected (see Table 1) based on the data collected for a large data bank related to foreign direct investments by Finnish firms by the author of this paper during the last twenty years Some of the selected variables like cultural distance have been included in several earlier studies, but as stated above, the earlier results have been rather mixed. Some of the variables have been analysed very limitedly so far, like the relations between the four separate dimensions culture and IJV performance. Thus additional evidence is clearly needed related to their relations with IJV performance.

3.1 Foreign Parent Related Variables

Related to the effect of the size of the foreign parent firm one could expect that because larger firms usually have more financial, management etc. resources and their international experience is greater than that of smaller companies, their need for a local partner is smaller. If they need a partner then based on above referred arguments their ability to negotiate and bargaining power is greater than that of smaller firms. Therefore it could also be expected that they would have better performance with their IJVs. However, one could expect that large firms would be more prone to later buy out the local partner than smaller firms based on the greater level of financial and management resources. Therefore based on stability measure a negative relation could be expected between the size of the foreign partner and IJV performance.

The parent size variable has been included to ten earlier studies from which the results in six studies indicate no relation at all and the results in four studies a negative relation (see Robson et al. 2002). Also in a recent study by Pope (2003) the results did not support the expectation that the larger the parent firm, the more likely the joint venture is to dissolve. Based on above it seems that there does not exist any direct relation between size of the foreign partner and IJV performance.

> Hypothesis 1: There is no direct relation between the size of the foreign partner and IJV performance.

Degree of diversification of the foreign parent. One key variable usually expected to influence on the preference of an IJV against WOS as ownership structure of the unit is the degree of diversification of the foreign investing firm. The higher the degree of diversification the higher the expected preference for an IJV because of the greater need for financial and management resources than in highly concentrated companies. Based on the same argumentation one could expect - especially based on the stability measure – that highly diversified firms would prefer to keep the IJV arrangement and therefore they should perform better than highly concentrated firms. Both Gomes-Casseres (1987) and Kogut and Singh (1988) suggest that high degree of diversification of the parent increases the use of IJVs against WOSs and decreases probability of dissolution of the IJV. Although Pope (2003) could not find support to the expectation that IJVs with highly diversified

parents are less likely to dissolve than IJVs with less diversified firms, it is expected that:

> Hypothesis 2: There is a positive relation between degree of diversification of the foreign partner and IJV performance.

International experience and target country specific experience. Experience can improve performance/longevity of a FDI in several ways. First, experienced firms are probably better market and partner "scanners" than novices in the international arena. More accurate evaluations of potential sites and IJV partners for a FDI should increase probability of better performance and reduce risk of subsequent divestment. Second, as experience is accumulated it becomes easier to avoid many of the problems involved in running foreign subsidiaries, and to find workable solutions if problems should arise after all. Finally, international operations take place in environments that are often subject to seemingly dramatic changes, for example sudden changes in exchange rates and prices, competition etc. The interpretation of such events and how to respond to them can vary greatly, depending on how experienced the decision-makers are. An event that from the viewpoint of an unexperienced firm is regarded as quite extraordinary, may be interpreted by an experienced firm as simply being normal fluctuations. What could lead to a withdrawal from an operation in the first case, may well barely raise any concern in the latter. In sum, higher levels of experience should lead to lower dissolution rates and therefore to better performance. However, based on the greater international experience and usually greater need for integrating the operation of various units to the international network of the foreign partner than in cases of less experienced foreign parents, the stability of the units could be expected to be lower in the former than in the latter cases. The empirical results (see Robson et al. 2002) seem to be very mixed: some studies have found positive relation, some no relation and in one study (Hu et al. 1992) even a negative relation. Also the results by Pope (2003) indicated no relation between international experience of the parent and probability of dissolution of the IJV. The results indicate also that the measure of performance seems not to have significantly influenced the results.

Another aspect of experience is the **target country specific experience**. Target country specific experience should reduce uncertainty related to the operation environment and in this way increase the possibilities for better performance. However, target country specific experience may also reduce the need for a local partner after the starting period of the operation. Thus, as in the case of international experience, it could be expected that, based on survival, the relation would be positive, but based on stability it would be negative. Robson et al. (2002) found seven studies where the relation had been analyzed and again the results are mixed: some results support positive, some no and one study a negative relation. Also the results in a recent study by Pope (2003) give support to the greater probability of dissolution when the target country specific experience

increased. Furthermore, results in the two studies identified by Robson et al. (2002) where stability had used as the measure of performance, indicated positive relation between target country specific experience and IJV performance.

Thus there is strong theoretical argumentation that international and target country specific experience would lead to better performance. However, the empirical results are very mixed giving support to both positive, negative, and no relation between those variables and IJV performance. Based on above and on the general results that international experience has decreased the probability of divestment of FDIs (see e.g. Mariotti and Piscitello 1997; Larimo 2000), it is expected that:

Hypothesis 3: International experience has a positive impact on IJV performance.

Hypothesis 4: Target country specific experience has a positive impact on IJV performance.

3.2 Target Country Specific Variables

As discussed earlier, from the target country specific variables for this study economic level, economic growth, political risk, and cultural distance were selected. Concerning cultural distance specific features of cultural distance were also decided to be added to the analysis to give more detailed view of the impact of cultural issues on the IJV performance.

Key features to be included into empirical studies related to foreign operation is the economic environment in the target country. Aspects to be analyzed are often the level of ecomic development and economic growth in the target country. The higher the level of economic development in the target country the more more developed the infrastructure in the target country usually is. Also the impact of the local government on the operations of the unit are usually much more limited than in countries of lower level of economic development. Furthermore, the amount of potential IJV partners and suppliers for the IJV is greater making it easier to select a suitable partner for the IJV and secure the important supply flows the IJV increasing in this way the possibilities for the longevity, survival and stability of the IJV operation. In countries of lower economic development the probability of problems in finding a suitable partner for the unit and/or secure supplies of raw materials and components is often much greater decreasing therefore the possibilities for good performance. What concerns economic growth the better the possibilities for new entrants in the target market. Furthermore, the IJV alternative is expected to be better than the WOS in cases of high economic growth in order to speed up the entry in the market. Thus it can also be expected that the high economic growth would promote the performance of the IJV.

As discussed earlier, several of the empirical IJV studies have focused on IJVs made in one single country or in a limited amount of countries. Therefore there

has not been focus on the impact of the economic environment on the IJV performance (Robson et al. 2002). However, some older (Gomes-Casseres 1987; Campbell 1997), but also a more recent study (Pope 2003) found empirical support to the expectations that economic sophistication of the target market influences positively the IJV performance. What concerns growth in the target country, industry growth has been found to have in two studies no relation and also in two studies a positive impact on IJV performance. Based on above and on the expected positive correlation between economic and industry growth, it is expected that:

Hypothesis 5: There is a positive relation between level of economic development in the target country and IJV performance.

Hypothesis 6: There is a positive relation between the economic growth in the target country and IJV performance.

A high political instability/political risk in the target country leads to a more uncertain environment of the operation. Although the risk to local government expropriations has been very minimal during the last thirty years (see e.g. Minor 1994) there is uncertainty related to several other government policy issues having an impact on IJVs like taxation, import duties and possibilities of raw materials and components etc. An unstable environment decreases the possibilities to control the IJVs or to predict its future. In unstable environments firms tend to be less long-term oriented and environmental instability increases the likelihood that firms will engage in opportunistic behavior (Chen and Boggs 1998). Thus a stable political environment should also promote the performance of the unit. Rather few (five) earlier studies have included the political instability/risk variable (Robson et al. 2002). Surprisingly in only one of those five studies a positive relation was found between political risk and IJV performance whereas in four studies no relation was found. The results indicate that even in highly politically uncertain environments IJVs have been able to survive and perform better than one could expect. However, the results in a recent study (Pope 2003) indicated additional support to the expectations that political uncertainty increases the likelihood of the dissolution of the IJV. Therefore for the empirical part of the study it is expected that:

Hypothesis 7a: There is a negative relation between the political instability/ risk in the target country and IJV performance.

Hypothesis 7b: The impact of political instability/risk is greater in developing than in developed countries.

Cultural distance between partners and its impact on IJV performance has so far been the most commonly reviewed variable. The distance has usually been expressed multi-dimensionally (based on Hofstede´s (1980) four cultural dimensions and index developed by Kogut and Singh (1988). Cultural similarity decreases problems caused by cultural issues – e.g. different norms of behavior

and productivity, measurement and goals related to performance - and should facilitate trust and cooperation between partners. A greater cultural distance apparently increases differences in norms of behavior, differences in goals etc. When conflicts arise cultural similarity makes it easier for firms and their partners to understand each other and resolve the differences (Barkema and Vermeulen 1997). Therefore a negative relation between cultural distance and IJV performance could be expected.

Of the 24 empirical studies identified (Robson et al. 2002) eleven indicated no relation, nine a negative relation, and four a positive relation. In those studies where a positive relation was found the authors offer as explanations that partners from culturally distant countries might have more to learn from each other and that the potential opportunities to realize synergies may be quite great because of different kind of strengths e.g. between Western and Asian companies (see Pangarkar and Lee 2001). A more detailed analysis of the impact of cultural distance indicates that a non-significant relation was usually found when a financial or multi-dimensional measure for performance was used whereas in cases of stability and survival measures most studies indicated a negative relation. Furthermore, the negative impact of cultural distance seemed to be greater in studies focusing on IJVs established pre-1990 and/or operating in developing countries than in studies focusing on more recent IJVs and/or IJVs established in developed countries. Related to the time periods it is noteworthy, however, that the amount of studies in the review by Robson et al. (2002) including IJVs established in the post-1990 period is rather limited. Pope (2003) analyzed in her study also the possibility that the relation between cultural distance and IJV performance would not be a linear one, but she did not find support to the expectation that medium levels of cultural distance would lead to better performance than low or high levels of cultural distance. Therefore, for the empirical part of the study it is expected that:

> Hypothesis 8a: There is a negative relation between cultural distance of the home country of the foreign partner and target country of the unit and IJV performance.
>
> Hypothesis 8b: The negative influence of the cultural distance variable on IJV performance is greater in IJVs established in developing than in developed countries.

Because of the mixed results of the impact of cultural distance on the choice and performance in foreign operations including IJVs, several authors have raised the question that there should be different measures for cultural distance and that the impact of various dimensions of culture should be analyzed in more detail. In IJV settings a pioneering study has been the study by Barkema and Vermeulen (1997). They used the five different cultural dimensions by Hofstede - power distance, uncertainty avoidance, individualism, masculinity, and long term orientation – and the authors expected that there exists differences in the impact of various dimensions

Differences in uncertainty avoidance are difficult to cope with because they imply differences in how people perceive opportunities and threats in their environment and how they act upon them (Schneider and Meyer 1991). In high uncertainty avoidance countries organizations tend to respond to uncertainty by building up a system of high formalization and hierarchy. In low uncertainty avoidance countries people are more attracted to flexible, ad hoc structures that leave more room for improvisation and negotiation. Differences in uncertainty avoidance lead to differences in how partners perceive and respond to events in the environment of the IJV, which will likely breed disagreement and disputes between the partners, and have a detrimental impact on the IJV´s performance. Power distance and individualism directly bear on issues of internal integration and influence relationships with personnel, such as the organization´s choice of control forms, reward systems, and so on (see Hofstede 1980, 1993, 2001). Management of personnel is usually one of the first activities to be left to the local partner. There is also evidence that MNCs do not transfer cultural values related to power distance and individualism to their foreign subsidiaries (Shoeters and Schreuder 1988). Thus tensions between the partners with differences along these dimensions may be avoided. Hofstede (2001) and Shenkar and Zeira (1992) suggest that having partners from both "feminine" and "masculine" cultures may even benefit the IJV. The aggressive attitude of one partner and the relationship orientation of the other may complement each other rather than collide and the relationship orientation of the other may complement each other rather than collide.

The above discussion suggest that differences in uncertainty avoidance would be more important than the other three dimensions. The empirical results by Barkema and Vermeulen (1997) supported the expectations: uncertainty avoidance and long-term orientation had greater differential negative impact on IJV survival than masculinity, while the two other dimensions (individualism and power distance) had no impact. The long term orientation is left out from this study because of greater data problems (missing data for several countries). Therefore it is expected that:

Hypothesis 9: There is a negative relation between uncertainty avoidance and masculinity dimensions and IJV performance.

Hypothesis 10: There is a no direct relation between power distance and individualism dimensions and IJV performance.

3.3 Investment Specific Variables

As discussed earlier, from the possible investment specific variables four were selected for this study: relatedness of the operation, R&D intensity of the field, ownership structure, and form of establishment.

An issue of greater interest related to partner selection has been the presence of an overlap between business operations of the foreign partner and the IJV and

those of the foreign partner and of the local partner. Business field related experience reduces the amount of uncertainty and should therefore improve the possibilities for better performance. Unrelatedness of the operation to the foreign partner increases uncertainty and especially if the foreign partner does not have any target country specific experience the risks related to the IJV is very high. Relatedness between the IJV´s business and the parents´ business should facilitate the transfer of tacit knowledge due to similarity in organizational processes (Saxton 1997). Transfer of tacit knowledge is likely to be a key source of synergies in several inter-firm relationships (Hedlund 1994; Teece 1997). Furthermore, due to similarity with the parent, related IJVs are more likely to be tightly integrated with their parents which should increase possibilities for better performance e.g. in low-cost supply units (either for one of the parents or both of them). Finally, e.g. in some Asian countries like in China, the host governments view related types of units more favorably than unrelated types of units and grant them preferential treatments.

The review by Robson et al. (2002) indicates very mixed results. Both competing partners and inter-partner business overlap have resulted to positive and negative impacts on performance depending on the study. In some studies business overlap has also been found to have no relationship with IJV performance. Thus the results are really mixed. The results in the unexpected findings may partly be explained by the fact that if the operations of the local partner/IJV are partly or totally different to those of the foreign partner, the foreign partner apparently needs more the contribution of the local partner which may increase the stability in the ownership of the IJV. However, in general, the results in several studies also confirm that the performance has been better/probability of divestment lower in related than in unrelated types of FDIs (see e.g. Hennart et al. 1999; Li 1995, Yamawaki 1995). Although the previous results have been very mixed, it is expected that:

> Hypothesis 11: There is a negative relation between unrelatedness of the unit to the operation of the foreing partner and IJV performance.

R&D intensity of the field. High R&D intensity of the foreign operation/unit is usually expected to decrease the probability of choosing the IJV ownership structure because of the greater problems to find a suitable partner and greater problems with the leaking of the key asset of the foreing firm – technological knowledge – than in IJVs operating in low or medium R&D intensity fields. Based on these facts and because of the shortened life cycles and increased continuous need for R&D inputs in high R&D intensity fields one could expect a negative relation between R&D intensity of the field of the IJV and unit performance. However, the empirical results related to the impact of the technical sophistication and venture R&D intensity are very mixed (Robson et al. 2002). Based on IJV technology sophistication two studies indicate a positive relation, four studies no relation whereas three studies indicate a negative relation. Based on the R&D intensity of the IJV three studies indicate a positive relation and other three studies

no relation at all. Four additional studies have analyzed the impact of the R&D intensity of the foreing parent (Robson et al. 2002). In three of the four studies identified no relation was found whereas in one study (Nakamura 1991) a positive relation was found. Thus, the results are mixed, but a majority of the studies seem to indicate no direct relation between R&D intensity of the field and IJV performance.

> Hypothesis 12: There is no direct relation between R&D intensity of the field of the unit and IJV performance.

One of the most commonly reviewed variables so far has been the influence of the distribution of ownership in the IJV. According to Killing (1983) the dominance of one partner will increase stability, because effective control will enable the parent to manage the IJV as a wholly-owned subsidiary, avoiding the managerial costs inherent in a IJV. Thus it reduces transaction costs and stabilize the IJV. However, Beamish (1985) and Blodgett (1992) argue that roughly equal equity shares will result in greater stability and performance because the partners are equally committed to the JV and both partners possess roughly equal bargaining power. The empirical results for both balanced owenrship structure and foreign dominant ownership indicate in most studies no relation with IJV performance (Robson et al. 2002). Also the results in the study by Pope (2003) indicated no relation between the ownership structure (unequal vs. equal) and probability of dissolution. Concerning balanced ownership no relation has usually been found especially in studies where the performance has been measured using stability and multi-dimensional performance measures and in those foreign dominant ownership studies where financial and multi-dimensional measures have been used. Stability had been used as the measure of performance only in one study analyzing the impact of foreign dominant ownership. Thus additional empirical evidence is clearly needed. Related to the balanced ownership structure there is some evidence that the structure has more negative impact in developing than in developed countries (Robson et al. 2002). Based on above it is expected that:

> Hypothesis 13a: There is no direct relation between balanced equity ownership structure and IJV performance.

> Hypothesis 13b: There is no direct relation between dominant foreign equity ownership and IJVperformance.

Form of establishment. A foreign FDI including IJVs can be made either in the form of an acquisition or a greenfield investment. The main differences between these two forms are that 1. an acquisition (in IJVs a partial acquisition) means buying a going concern, a bundle of assets (management, production etc.) whereas in greenfield investments everything is build from the scratch, 2. building an unit from the scratch takes much more time than buying a part from a going concern , and 3. a greenfield investment increases total supply while a partial acquisition

does not expand total supply. The analysis of the impact of the form of establishment is excluded from most IJV studies mainly because they include only IJVs established in the form of a greenfield investment. The definition of an IJV in this study includes, however, also partial acquisitions. Soonkyo (2000) did not find any relation between form of establishment and IJV survival in his study of Japanese IJVs in the USA. However, what concerns the impact of form of investment in general on FDIs, there is strong opposite evidence. Several authors (see Larimo 2000) have found that an acquisition form of investment significantly increased probability of divestment, i.e. had a negative impact on performance. The key reasons for the higher divestment rates have been the unrealistic levels of synergy goals and problems in the integration of the foreign unit. Furthermore, there is evidence that staged-acquisitions seem to be rather common (Larimo 1993). Therefore it is expected that:

Hypothesis 14: There exists a negative relation between partial acquisition form of establishment and IJV performance.

4 Methodology and Sample

Because of the nature of the dependent variable in different cases, a logit model was decided to be used as the methods of analysis. In the model the probability that a certain type of situation – performance – is found is explained by the reviewed variables. In the first model the performance is analyzed based on the longevity of the IJVs, in the second model the performance is based on the survival of the IJV, and in the third one based on the stability of the ownership structures in the IJV. The regression coefficients estimate the impact of independent variables on the probability that the IJV has lived for a longer time period/been divested/ been unstable. A positive sign means that the variable has increased the probability of the unit to have been existing for a longer time period/survived/been stable and a negative sign the vice versa.

The data is based on a register of manufacturing FDIs by Finnish firms collected by the author starting in 1985. Based on various data sources (leading business journals, company reports, company www-sites, earlier surveys made by the author) the register included ca. 2000 manufacturing FDIs made by Finnish firms at the end of 2004 (investments made in 1960-2004 and a continuous follow-up of the development of those units). Of those FDIs 775 were manufacturing IJVs established by Finnish companies around the world during 1970-2001. Of the identified units 49 could not be included to the sample because of missing pieces of information related to the independent variables. Thus the final sample is based on 726 IJVs. The IJVs were located in over 60 countries and made by over 130 Finnish firms. Of the units 429 (59%) were located in Western-European countries (WE) or in North-America (NA: USA and Canada), and 297 (41%) in other countries. In the former group the main target countries were Sweden (104 IJVs),

USA (55), Germany (46), and the UK and France (both 35) whereas in the latter group the most common target countries were Estonia (40), China (32), Russia (30), and Poland (24). Of the IJVs 304 (42%) were made in 1970-89 and 422 (58%) in 1990-2001. Until mid-1980s the amount of FDIs made by the Finnish companies was rather limited. In the late 1980s there was a clear growing trend of FDIs including IJVs, mainly because of the EU integration process. The amount of FDIs declined in early 1990s, but turned again into growth in mid-1990s because of e.g. new opportunities and growth in Eastern Europe and Asia. Most of the IJVs, especially in WE and NA, included two partners, one Finnish firm as the foreign partner and one local firm.

The operationalization of the variables used in the analysis are presented in Table 2. In the operationalization of various variables operationalizations used in earlier studies were followed. The performance of the unit was evaluated in three different ways: 1) Based on longevity: how long time in years the IJV had existed. 2) Based on survival: whether the IJV was still at least partly in Finnish ownership or not. 3) Based on stability: whether the IJV was still in the Finnish ownership and no greater changes in the ownership share had existed. In this alternative greater changes mean whether or not there had existed changes of at least 20% in the ownership or smaller changes where the minority ownership would had changed to 50-50 –ownership, majority ownership, or to a WOS; a 50-50 – ownership would had had to a minority ownership, majority ownership or to a WOS; or a majority ownership would had changed to a minority -ownership, 50-50 -ownership, or WOS.

Appendix 1 includes descriptive statistics of the sample. Majority of the IJVs were established by companies which already had extensive international experience and in several cases already had at least one manufacturing unit in the target country. The field of business of the IJV was in a clear majority closely related to the field of the Finnish partner. A majority of the IJVs were established in the form of partial acquisitions. As referred above, ca. two-thirds of the units were located in various OECD-countries and mean cultural distance between Finland and the target countries was 1,65 using Hofstede's four dimensions and the formula developed by Kogut and Singh (1988). Along various dimensions of culture the mean values for the target countries were between 43 (MAS) and 60 (IDV) whereas for Finland the values are between 26 (MAS) and 63 (IDV). The Finnish partner had majority (dominant) ownership in 40% cases, 18 % were 50-50 IJVs and in 42 % the Finnish partner had the minority ownership in the IJV at entry. As may be expected, the highest correlations were found between following variables: PSIZE and DIVER, PSIZE and INTEXP, DIVER and INTEXP, POLINSTAB and ECONLEVEL (a negative correlation), and CULTDIST and various dimensions of cultural distance. Otherwise the correlations were rather low indicating now severe problems with multicollinearity (see Appendix 1). Because of the found correlations several additional analyses were made which are discussed later.

Table 2. Operationalization of variables and expected signs

VARIABLE	OPERATIONALIZATION	EXPECTED SIGN
PARENT SIZE (PSIZE):	Total sales of the Finnish company in the year preceding the FDI changed to Euros. A logarithmic version is taken because it may be expected that the influence is not linear.	0
DIVERSITY (DIVER):	Degree of diversity of the Finnish company based on the three level SIC codes where the firm operates.	+
INTERNATIONAL EXPERIENCE (INTEXP):	The number of foreign manufacturing investments made by the Finnish firm before making the reviewed IJV. A logarithmic version is taken because it may be expected that the influence is not linear.	+
TARGET COUNTRY EXPERIENCE (TCEXP):	The length of earlier manufacturing experience in years in the target country.	+
ECONOMIC LEVEL (ECONLEVEL):	The GDP per capita in the target country in the year of the investment, purchase parity corrected (IMF and Central Intelligence Agency statistics).	+
ECONOMIC GROWTH (ECONGROWTH):	The economic growth (growth rate of the GDP in %) in the target country in the year preceding the investment (IMF and Euromoney stat).	–
POLICITAL INSTABILITY (POLINSTAB):	Political risk in the target country in the year preceding the investment based on the Euromoney risk index (100 minus the index value).	–
CULTURAL DISTANCE (CULTDIST):	Cultural distance between Finland and the target country of the IJV based on four dimensions by Hofstede (1980, 1993, 2001) and the formula developed by Kogut & Singh (1988) using all countries for which Hofstede informs the values of the four cultural dimensions.	–
POWER DISTANCE (PDI), INDIVIDUALISM (IDV), MASCULINITY (MAS), UNCERTAINTY AVOIDANCE (UAI):	Values along the four dimensions based on Hofstede (1980, 1993, 2001) – UAI and MAS – PDI and IDV	 – 0
UNRELATEDNESS OF THE UNIT (Unit unrelatedness):	Dummy variable equal to one if the foreign company had no experience from the same SIC field of industry of the IJV, otherwise zero.	–
R&D intensity	R&D intensity of the field where the IJV unit is operating, three categories; receives value 2 (high) if the code is SIC 2833-2834, 3573-3574, 3579, 36, 37, and 38 (industries where R&D spendings on the average over 4% from total sales); receives value 1 (medium) if theSIC code is: all 28 except 2833-2834, 30, 3339, 3341, 3356-3357. 3369, 35 except 3573-3574, and 39 (industries where R&D spendings on the average are between 1 and 4%); receives value 0 (low) if the code is: all the rest. (OECD statistics).	0
Dummy majority:	Receives value 1 if the ownership of the foreign partner in the unit is 51-94 percent, receives value 0 in cases where the foreign ownership is between 10-50 percent.	0
Dummy 50/50: (Dummy 50)	Receives value 1 if the ownership in the IJV is equally divided between the partners, receives value 0 in cases where the foreign ownership is between 10-49 or 51-94.	0
Partial acquisition (PARACQ):	Dummy variable which receives value 1 if the IJV was a partial acquisition and 0 in case where the form of establishment was a greenfield investment.	–

5 Results

As discussed above, the sample was based on 726 IJVs established in 1970-2001 by Finnish companies in various foreign countries. The first analysis was made based on the longevity of the units. The mean longevity of the units in the sample was 9.7 years. For the longevity analysis it was decided to have as the zero group units which had been divested within five years from the establishment (poor

performance) and as the one group units where the longevity was 10 years or more (good performance). The former group included 46 IJVs (6.3% of the total sample) and the latter group 216 IJVs (29.7%). The limits of five years and ten years are somewhat arbitrary but were based on the facts that IJVs are usually targeted to last for a longer time period and some studies have indicated peaks of divestments when they are six to seven years old (also this study indicated same type of peaks). A positive sign in the model means that the variable had increased the longevity of the unit and a negative sign the opposite (see Table 3).

The second model in Table 3 includes the results based on survival. Of the 726 IJVs 351 (48.3%) had been divested and 375 (51.7%) units were still in the partial or total ownership of the Finnish company. Thus almost half of those units which were originally IJVs were later divested. A positive sign in the model indicates that the variable had increased the probability of survival and a negative sign that the variable had decreased the probability of survival.

The third model in Table 3 includes the results based on stability of the ownership structure between partners. Based on stability (725 observations in the runs) 234 of the IJVs had been stable and 491 IJVs – about two-thirds (67.7%) had been instable. Of the instable cases 351 were divested and in 140 cases there had been greater restructuring in the ownership of the IJV. There had been restructuring also in several of those IJVs which were later on divested. In total the ownership of the Finnish partner in the IJV had decreased with at least 20% in 18 cases, increased with at least 20% om 257 cases, and in 216 cases the change had been smaller, but the change had meant that the ownership had changed from the original minority, equal, or majority position to a different structure meaning a greater change in the balance between the partners. The directions of changes indicate clearly that the changes have been mainly towards increased ownership by the Finnish partner. From those 257 cases where the share of the Finnish partner had increased the change had in 216 cases been a change from the IJV to the WOS structure (over 94% ownership by the Finnish partner). Of those 216 cases 119 (55%) were still owned by the Finnish company at the end of 2004 whereas 97 (45%) had been divested. A positive sign in the model indicates that the variable had increased the stability and a negative sign that the variable had decreased stability.

Regarding the number of variables that significantly influenced the performance the first model indicated that eight variables, the second model seven variables, and the third model ten variables had significantly influenced the performance. Three of the variables significantly influenced in all three models: DIVER, INTEXP, and IDV. However, the signs were uniform only in the case of IDV where all models indicated a negative sign whereas no relationship was expected. Thus a high individualism in the target country had against expectations influenced negatively the IJV performance. Noteworthy is that the IDV variable had much stronger impact if survival was used as the measure of performance than when longevity was used as measure of performance. In the two other cases the results were uniform based on survival and stability and opposite based on longevity. DIVER had increased longevity but decreased survival and stability whereas

Table 3. Results of the binomial regression analyses

	Expected sign	1. Longevity		2. Survival		3. Stability	
		Coeff.	Signif.	Coeff.	Signif.	Coeff.	Signif.
CONSTANT		4.571	0.183	2.547	0.073	0.763	0.602
PSIZE	0	0.271	0.068[a]	-0.131	0.110	-0.177	0.049[b]
DIVER	+	0.091	0.012[b]	-0.099	0.000[d]	-0.097	0.000[d]
INTEXP	+	1.258	0.000[d]	0.595	0.000[d]	0.589	0.000[d]
TCEXP	+	0.004	0.908	0.017	0.233	0.026	0.067[a]
ECONLEVEL	+	0.707	0.061[a]	0.032	0.829	0.110	0.469
ECONGROWTH	+	0.030	0.408	0.010	0.598	0.011	0.579
POLINSTAB	-	0.010	0.489	-0.009	0.178	-0.002	0.780
CULTDIST	-	0.607	0.102	-0.377	0.020[b]	-0.267	0.118
UAI	-	0.016	0.121	0.000	0.954	-0.003	0.583
MAS	-	0.028	0.027[b]	0.007	0.226	0.015	0.023[b]
PDI	0	0.027	0.071[a]	-0.004	0.578	-0.001	0.933
IDV	0	0.028	0.077[a]	-0.020	0.009[c]	-0.018	0.024[b]
Unit unrelatedness	-	0.433	0.424	-1.297	0.000[d]	-1.031	0.021[b]
R&D intensity	0	0.933	0.001[c]	-0.068	0.585	-0.133	0.317
Dummy majority	0	0.149	0.711	0.197	0.281	0.351	0.072[a]
Dummy 50	0	0.619	0.162	-0.537	0.020[b]	-0.575	0.028[b]
PARACQ	-	0.064	0.823	0.315	0.090[a]	-0.864	0.000[d]
Model chi-square		72.618[d]		100.854[d]		107.086[d]	
Number of observations		262		726		725	
% of correct observations		76.7 %		64.9 %		70.8 %	

a ≤ 0.1 b ≤ 0.05 c ≤ 0.01 d ≤ 0.001

INTEXP had decreased longevity but increased survival and stability. Furthermore, all three models indicated that in three additional cases – ECONGROWTH, POLINSTAB, and UAI - no significant relation was found. However, as will be discussed later, even all those three variables were significant in some of the additional analyses made.

What concerned the significance of other variables the impact depended on the measure of performance. PSIZE was significant both in models one and three, but the signs were the opposite. PSIZE had increased duration but increased instability. Also MAS was significant both in models one and three and the variable had also a positive sign in both cases. Thus IJVs in highly masculine cultures had

longer duration and higher stability than IJVs on average. Three other variables – Unit unrelatedness, Dummy50, and PARACQ - had signficantly influenced the performance in models two and three. The signs were in all three cases in both models similar – negative. Thus unrelated type of IJV to the foreign/Finnish partner, equal ownership in the unit, and establishing the unit in the form of partial acquisition instead of making a joint greenfield investment had all decreased probability of survival and stability. For unit unrelatedness and partial acquisitions this was according to the expectations, but for the Dummy50 a non-significant relation was expected.

Six of the reviewed variables were significant in only one of the three models. ECONLEVEL, PDI, and R&D intensity were significant only in the first model thus based on longevity. The two first ones had a positive sign, but both of them were only mildly significant. For ECONLEVEL the result was according to the expectations but for PDI a non-signficant relation was expected. The R&D intensity had a negative sign – as expected – and the variable was also significant at the 0.01 level. The result indicates clearly the problems of having long-standing IJVs in high R&D intensive sectors. One of the reviewed variables – CULTDIST – was significant only based on survival. The variable had the expected negative sign. Thus also the results of this study give additional support to the mixed results related to the impact of the CULTDIST variable found in earlier studies. The two variables which were significant only in the third model were TCEXP and dummy majority. Both of them had a positive sign. Thus, as expected, target country specific experience had increased the probability of positive performance. What concerned the impact of ownership structure a non-signficant relation was expected, but the results indicated that a majority ownership by the Finnish partner at entry had increased the stability of ownership structures. Noteworthy is, that the two variables were significant only at the 0.1 level.

In order to analyze the results in more detail several additional analyses were made. First, because of the relatively high correlations between some variables PSIZE, INTEXP, and CULTDIST variables were excluded from the model. The results indicated that now the TCEXP variable had a signficant positive influence (at the 0.001 level) on the performance. Another noteworthy results based on the survival measure were that both UAI and PDI were significant, the former having a negative and the latter a positive impact. Furthermore, the Dummy50 variable lost the statistically significant impact. Based on stability measure except for TCEXP no greater changes in the impact of various variables was found.

Additionally, the impact of the location of the IJVs and timing of establishment was analyzed. As discussed earlier ca. 59% (429) of the cases were located in WE and NA and 41% (279) in other countries (emerging and developing countries), and ca. 42% (304) were made before 1990 and 58% (422) in 1990 or more recently. In WE and NA only 49% of the cases had survived and ca. 25% had been stable, whereas in the other locations the survival rate was 58% and stability rate 45%. Of the units established in the first period only 38% had survived at the end of 2004 and the stability rate was as low 20% whereas from the younger units 58%

still existed and the stability rate was 42%. The low survival and stability rates in WE and NA are partly explained by the fact that over 80% of the units established before 1990 were located in WE or NA. Especially low survival rate was found in the NA located units – ca. 40%.

The analyses indicated that INTEXP variable was the only one which was significant had the same sign in both location groups independent of the measure of performance. From the other reviewed variables the PSIZE and IDV variables were the only ones which were significant using all three measures of performance among the same location group (in the group other). DIVER was significant and had the same negative sign in both location groups when survival and stability were used as the measures of performance.

ECONLEVEL and dummy majority were signficant in the WE and NA location group whereas POLINSTAB, CULTDIST, and two dimensions of culture – MAS and IDV - were significant only in the other location group. In the two first cases the results were according to the expectations (hypotheses 7b and 8b). In cases of unit unrelatedness, Dummy50, and PARACQ significant impacts were found in both sub-groups. Thus even in these cases the influences are not restricted either to WE and NA or mostly developing country locations. Three of the variables – UAI, PDI, and R&D intensity - were significant only in the WE and NA location group (and all three only when longevity was used as the measure of performance).

Based on the timing, INTEXP was again the only variable which had influenced significantly independent on the measure of performance and timing – pre-1990 or 1990 or more recently. Furthermore, DIVER and – surprisingly – ECONGROWTH – had significantly influenced the results in both time periods in total in five of the six models. Noteworthy is that in the case of ECONGROWTH the signs were in the older period negative but in the more recent period positive. Furthermore, significant influences on IJV performance by TCEXP, UAI, R&D intensity, and dummy majority variables were found only among IJVs established before 1990 whereas in cases CULTDIST, IDV, unit unrelatedness, and PARACQ the situation was just the opposite, the variables had influenced only in the more recent IJVs. As discussed above, the diversity of IJV location by Finnish firms increased after 1990 which may partly explain the results related to CULTDIST.

6 Summary and Conclusions

The role of IJVs in international business operations has been significant and there are no signs that their role would decrease in future. Thus the interest towards IJVs, their performance, and the impact of various variables on the performance shall continue. The goal of this study was to give additional evidence of relations between selected foreign parent firm, target country, and investment strategy related variables and IJV performance. An additional goal is to analyze whether there is variation in the results depending on the measure of performance. Based

on the literature review 14 hypotheses were developed to be tested in the empirical part of the study. The empirical part was based on 726 IJVs in the manufacturing sector established by Finnish firms in over 60 various countries in the period 1970-2001. As the measures of performance were selected three objective measures: longevity, survival, and stability.

The results of the study indicated almost 50% divestment and ca. 67% instability rates. The rates are very high, but as high figures have been found also in some earlier studies (Harrigan 1988, Hennart et al. 1999). The results give additional support to the higher divestment and instability rates in IJVs established by Western European than e.g. by Japanese and Korean companies in their IJVs established in other Asian counties. Furthermore, the results give additional support to the findings (e.g. Reus and Ritchie 2004) that the measure of performance has some influence on the impact of various variables on IJV performance.

The greatest influence on the performance was found to exist in cases of INTEXP, DIVER, and IDV variables (see Table 4). The results were totally uniform only in case of the IDV dimension of culture which had against expectations a negative impact on performance. Based on survival and stability measures the results indicated positive impact for INTEXP and a negative impact for and DIVER. In the two first cases the results were according to the expectations whereas in the case of DIVER the results were the just the opposite.

Based both on survival and stability Unit unrelatedness, ownership Dummy50, and PARACQ had significantly influenced the performance. Furthermore, almost all hypotheses presented received support in the total sample on at least one of the three measures of performance and even the rest received support either based on the location and/or timing sub-groups of the study. Thus it can be concluded that that variables belonging to all reviewed three main categories in this study – foreign parent, target country, and investment strategy – had significantly influenced the IJV performance.

Concerning the impact of individual variables the earlier results have been rather mixed. E.g. related to the impact of cultural distance results by e.g. Barkema and Vermeulen (1997) indicated negative influence, those by Park and Ungson (1997) a positive impact, and those by Glaister and Buckley (1998) and Pope (2003) a non-significant influence. Thus the results in this study coincide with those in the two last mentioned studies. But the results of this study indicated also that in the emerging and developing country sub-sample the cultural distance had a negative impact on performance. Thus the results of this study coincide in this aspect with the findings by Sim and Ali (2000). Furthermore, Barkema and Vermeulen (1997) noticed that the UAI dimension was more significant that the three other dimensions of culture by Hofstede (1980, 2001). The results by Pope (2003) did not find similar support as was the case also in this study.

The results of the impact of the international and target country specific experience on IJV performance have also been mixed. A recent study by Pope (2003) indicated that the degree of international experience did not significantly influence the probability to dissolve IJVs, whereas the target country specific experience

Table 4. Summary of results in the total sample

	Exp. sign	Longevity	Survival	Stability
H1: Size of the parent (PSIZE)	0	not supported	supported	not supported
H2: Degree of diversification of the parent (DIVER)	+	supported	not supported	not supported
H3: International experience of the parent (INTEXP)	+	not supported	supported	supported
H4:Target country specific experience of the parent (TCEXP)	+	not supported	not supported	supported
H5: Economic level of the target country (ECONLEVEL)	+	supported	not supported	not supported
H6: Economic growth of the target country (ECONGROWTH)	+	not supported	not supported	not supported
H7a: Political instability of the target country (POLINSTAB)	-	not supported	not supported	not supported
H7b: Influence greater in developing countries		supported	supported	supported
H8a: Cultural distance to the target country (CULTDIST)	-	not supported	supported	not supported
H8b: Influence of cultural distance greater in developing countries		not supported	supported	supported
H9:Degree of uncertainty in the target country (UAI)	-	not supported	not supported	not supported
H9: Degree of masculinity in the target country (MAS)	-	partially supported	not supported	not supported
H10: Degree of power distance in the target country (PDI)	0	not supported	supported	supported
H10: Degree of individualism in the target country (IDV)	0	not supported	not supported	not supported
H11: Unit unrelatedness to the foreign parent	-	not supported	supported	supported
H12: R&D intensity of the field of industry	0	not supported	supported	supported
H13a: Foreign majority ownership in the IJV	0	supported	supported	not supported
H13b: 50-50 ownership in the IJV	0	supported	not supported	not supported
H14: Partial acquisition form of establishment (PARACQ)	-	not supported	supported	supported

increased the probability to dissolve. The results of this study indicated that international experience had had more impact than the target country specific experience, but the direction of influence was dependent of the measure of performance. In those models where the target country specific experience was significant, the impact was positive supporting the findings by Barkema and Vermeulen (1997).

Finally, also the results about the impact of ownership structure have been mixed. In some studies equal ownership structures have led to better performance than majority foreign ownership, but the results have been very mixed. Recently Pope (2003) did not find support to the assumption that IJVs with unequal ownership levels would more likely fail than IJVs with equal ownership levels. The results of this indicated support to the view that equal ownership had increased probability of poorer performance, and limitedly support that majority ownership increased probability of better performance, but only in Western Europe and North America whereas in emerging economies and developing countries there was limited opposite support. Thus the results indicate clear need for further research on IJV performance and determinants of performance.The main management implication is apparently the fact that variables belonging to all reviewed three types of main groups – foreign parent, target country, and investment strategy – seem to have an impact on IJV performance. Furthermore, it seemed that total FDI experience of the company had more impact than target country country specific experience. The IJV performance seemed also to be very limitedly dependent on the economic level, economic growth, and political instability in the target country. The total cultural distance seemed to be less significant than some of the specific dimensions of the culture. Because the dimensions had opposite impacts on performance, a more detailed analysis of the single dimensions is needed. In general, the ownership structure does not seem to significantly influence IJV performance. Thus the optimal structure depends on the case, e.g. on the motives and/or target country of the IJV. Finally, unrelated types of IJVs and/or IJVs which are planned to be established as partial acquisitions have to be planned very carefully.

There were several limitations in the study and therefore also many avenues for future research. First, this study focused on only three objective measures of performance. Although results in several studies indicate high correlations between objective and subjective measures of performance this is not always the case. Therefore, of future interest would be comparisons along objective and subjective measures of performance. Moreover, there is evidence (see Gomes-Casseres 1987; Yan and Zeng 1999) that many successful joint ventures were found to undertake structural changes as adaptive actions to changes external environments or internal strategies of their parents. Secondly, the longevity analysis included only ca. one-third of the total sample. Thus alternative longevity analyses are needed based on a greater share of IJVs from the total sample. Thirdly, this study included both partial acquisitions and IJVs established in the greenfield form. In the further analysis the possible differences based on the form of establishment should be analyzed in more detail.

The fourth limitation of this study was that several variables like size symmetry, relationship-ties between the partners before the establishment of the IJV, and

venture size were not available in most of the cases and therefore these variables were excluded from the study. A fifth limitation is that although this study gave more detailed views from the role of various dimensions of culture based on the dimensions by Hofstede (1980, 2001), the fifth dimension – long term orientation was not included. In future the addition of the fifth dimension of culture – long term orientation – by Hofstede, but also other views and categorisations of culture and cultural distance could be used (see e.g. Barkema et al. 1997; Brouthers and Brouthers 2001). Finally, this study focused only on IJVs established by Finnish companies. Thus an interesting alternative would also be to compare the behavior and influencing factors among samples from other countries. Especially comparisons with the similarities and differences in the performance and variables influencing the performance in IJVs established by other Nordic firms because of the similarity of these countries in several respects would be of interest.

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Appendix 1: Descriptive Statistics and the Correlation Matrix of the Independent Variables

	Mean	Std.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
PSIZE (LOG) (1)	6.6	1.72	1.000																
DIVER (2)	12.0	6.94	0.702	1.000															
INTEXP (LOG) (3)	2.5	1.36	0.771	0.668	1.000														
TCEXP (4)	3.5	6.50	0.282	0.225	0.326	1.000													
ECON LEVEL (5)	8.8	1.22	0.074	0.150	0.047	0.269	1.000												
ECON GROWTH (6)	2.4	5.37	0.100	0.052	0.059	0.015	0.091	1.000											
POLITICAL INSTAB: (7)	23.3	23.02	0.082	0.151	0.035	0.222	0.751	0.269	1.000										
CULTDIST (8)	1.7	1.06	0.052	0.032	0.117	0.097	0.401	0.254	0.107	1.000									
PDI (9)	50.7	22.53	0.025	0.056	0.101	0.146	0.608	0.138	0.407	0.685	1.000								
IDV (10)	60.0	22.34	0.021	0.088	0.089	0.251	0.740	0.205	0.517	0.582	0.707	1.000							
MAS (11)	43.3	22.57	0.111	0.085	0.163	0.014	0.210	0.085	0.063	0.552	0.252	0.076	1.000						
UAI (12)	54.6	21.42	0.073	0.046	0.142	0.048	0.176	0.106	0.233	0.187	0.389	0.249	0.403	1.000					
UNIT UNRELATEDNESS (13)	0.07	0.26	0.077	0.029	0.117	0.017	0.139	0.021	0.121	0.079	0.114	0.136	0.025	0.079	1.000				
R&D INTENSITY (14)	1.6	0.68	0.086	0.147	0.130	0.030	0.051	0.119	0.108	0.116	0.030	0.013	0.053	0.056	0.117	1.000			
MAJORITY OWN. (15)	0.40	0.49	0.095	0.091	0.090	0.124	0.040	0.089	0.076	0.116	0.115	0.051	0.082	0.054	0.075	0.055	1.000		
50-50 OWNERSHIP (16)	0.18	0.38	0.120	0.129	0.143	0.104	0.102	0.044	0.140	0.005	0.038	0.062	0.020	0.019	0.056	0.042	0.374	1.000	
PARTIAL ACCQUISITION (17)	0.63	0.48	0.010	0.007	0.048	0.127	0.359	0.071	0.217	0.264	0.336	0.322	0132.	0.063	0.076	0.106	0.169	0.125	1.000

PART C:

Cooperatives

Strategic and Governance Structure Issues

Orientation in Diversification Behavior of Cooperatives: An Agent-Based Approach

George Hendrikse, Ruud Smit, and Mark de la Vieter[1]

Abstract. There are significant differences between the diversification behavior of investor-owned enterprises and cooperatives (Van Oijen and Hendrikse 2002). However, the origin of these differences is not well understood. The impact of the orientation of decision-makers on the evolution of the diversification portfolio is analyzed with agent-based simulations.

Keywords. Diversification, corporate coherence, cooperatives, agent-based approach

> '… presumption that most farmers cannot see any further than the farm gate and that directors of agricultural co-operatives, unless the executive or outside expertise are co-opted onto the board, are production, rather than market, orientated.' *(LeVay 1983, 20)*

1 Introduction

An important governance structure in the agrifood industry is the producer co-operative[2]. It is an association of many independent growers who jointly own a downstream processor / retailer (Sexton 1986). Cooperatives are not listed on stock markets, and have distinguishing features (Commission of the European Communities 2001, 12) like 'an orientation to provide benefits to members and satisfy their needs, democratic goal setting and decision-making methods, special rules for dealing with capital and profit, and general interest objectives (in some cases)'. A number of these features will feature prominently.

Agricultural and horticultural cooperatives operate nowadays in a rapidly changing environment. Two broad developments can be distinguished. First, a different product assortment is required in order to be successful in a market chang-

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[2] The labels marketing co-operative and agricultural co-operative are also used.

ing from a sellers to a buyers market. Second, many agricultural markets have become more competitive due to their increase in size, e.g. the emergence of the internal market in Europe and the worldwide trend towards globalization. This results in many merger activities (Dobson et al. 2003).

These developments raise a number of issues regarding the composition of product portfolios and the direction of merger activities of the involved enterprises. First, Teece et al. (1994) studies the coherence of the multiproduct business firm.[3] Relatedness between products in diversification portfolios of enterprises is established and summarized in a number of stylized facts (pp. 3–4):

- the sequence is generally for firms to begin as single product and subsequently become multi-product, rather than the other way around;
- firms maintain a constant level of coherence between neighboring activities;
- firms not only add businesses, they also commonly divest;

Corporate coherence entails that the corporation has to be taken into account. One way to do this is to take various corporate forms/governance structures into account. However, the relationship between governance structure and the direction of the evolution in diversification portfolios is not addressed by Teece et al. Our interest is in how the orientation of decision makers and corporate form determines the directionality of corporate coherence, while capturing the above stylized facts.

Second, the relationship between governance structure and diversification policy has to be addressed. Kamshad (1994) did not find a statistically significant difference between the diversification policy of investor owned firms and labor-managed firms. Similarly, Demsetz and Villalonga (2001) find no statistically significant relation between ownership structure and firm performance. However, Van Oijen and Hendrikse (2002) did find a statistical significant difference between the diversification portfolios of investor owned firms and agricultural cooperatives. It provides support for the now widely accepted view that institutions matter. They establish empirically relatedness and direction in the diversification policy of investor owned firms and marketing cooperatives. Investor owned firms diversify in related products, while cooperatives have a tendency to diversify in unrelated products. The debate has therefore progressed from the question of whether institutions matter to the analysis of how specific sets of institutions matter and under what circumstances.

Third, an important difference between cooperatives and investor owned firms is that the providers of input own the enterprise in a cooperative, while the providers of capital own the enterprise in an investor owned firm (Hansmann 1996). Various explanations for corporate diversification have been advanced (e.g., Hoskisson and Hitt 1990; Montgomery 1994; Ramanujam and Varadarajan 1989). These perspectives are rooted in different theories or paradigms, notably agency

[3] Huseyin and Venkatraman (2005) stress also the importance of relatedness.

theory (Jensen 1986), industrial organization (Palepu 1985), institutional theory (Scott 2001), the resource-based view of the firm (Penrose 1959), strategic contingency theory (Venkatraman 1989), and transaction cost economics (Williamson 1975). We will address briefly the resource-based view, institutional theory, and agency theory.

According to the resource-based view, firms can have excess capacity in resources (Penrose 1959). The resources can be redeployed in new businesses, which implies product diversification. Several types of resources can be used for diversification (Chatterjee and Wernerfelt 1991). A priori, no differences with respect to physical and intangible assets can be expected, but, in general, cooperatives have less financial resources than corporations. Specifically, cooperatives can only generate additional equity by retaining earnings and obtaining extra funds from the limited pool of members. In contrast, corporations can retain earnings and raise extra equity in the stock market from any investor who is willing to take the risk. Consequently, cooperatives may have fewer means to diversify than corporations.

Institutional theory (Davis et al. 1994; Kogut et al. 2002) investigates the influence of institutional factors on diversification behavior. Various institutional factors are mentioned, such as government regulation, interfirm networks, and ownership (e.g., Kogut et al. 2002). For our purposes, the institutional factor that D'Aunno, Succi, and Alexander (2000) refer to as norms about property rights seems particularly relevant, since it differs between corporations and cooperatives. The owners of a corporation have the right to use the assets in a way that maximizes the value of the firm. They are less concerned about meeting the corporation's original mission than they are about generation of profits. Faced with market pressures, they are likely to abandon traditional goals and commitments and exercise their right to use assets for other business opportunities (D'Aunno et al. 2000). In contrast, cooperatives are primarily founded in a specific industry to protect the interests of many small members against a monopolistic supplier or customer (Milgrom and Roberts 1992). The members are less likely to abandon the original mission and use the assets to seize business opportunities in industries they are not active in. As a consequence, diversification into new industries is more probable for corporations than it is for cooperatives.

Agency theory suggests that firms diversify because their managers have personal motives to do so. Managers do not return free cash flows to shareholders, but spend them on diversification projects, because of motives like empire building, pay increases, and reduction of employment risk (Ahimud and Lev 1981; Jensen 1986). This is not in the interest of the shareholders, for instance, because they can diversify risks themselves by building an efficient stock portfolio. However, in a corporation, the interests of shareholders and managers can be aligned, for instance by granting stock options to managers, which could help to eliminate diversification projects that destroy value. This instrument is not available in a cooperative. In addition, risk reduction through product diversification might actually be

in the interest of the members of the cooperative, since a large portion of their wealth is often tied to the cooperative (Hendrikse and Veerman 2001).

This article develops one argument to address the question why the diversification profiles of cooperatives and corporations differ. We will focus on the relationship between the orientation (perspective, cognition, and province of meaning (Arbnor and Bjerke 1997)) of the agents in different governance structures and the evolution of the diversification portfolio.[4]

Orientation reflects that the world is far too complex to be comprehended. The limited cognition / bounded rationality of individuals and organizations inevitably entails that only a few aspects of the world can be grasped, while many others are ignored. Heiner (1983) defines bounded rationality as the gap between the cognitive capabilities of the decision-maker and the complexity of the problem. This can be made specific in various ways, like specifying probabilities of making mistakes (Sah and Stiglitz 1986), adopting incomplete rather than complete contracts (Grossman and Hart 1986), or partitioning the states of the world (Rubinstein 1993; Bajari and Tadelis 2001). We adopt a partitioning approach in an agent based simulation environment, using the methodology of cellular automata (Schelling 1978; Hegselmann and Flache 1998), in order to capture by the notion of orientation the stylized facts formulated by Teece et al. (1994).

The methodology of Agent Based Modeling is a promising technique to study '… macro effects [as] dynamic consequences of decisions and mechanisms operating only at the micro level.' (Hegselmann and Flache 1998). Two important features of Agent Based Modeling are locality, i.e. agents basing their decisions on their own state and the local environment, and emergence of macrostructures, i.e. the evolution of the system as the outcome of the interactions between the agents. The importance of these concepts is already present in the writings of well-known scholars. For example, the classic article by Coase (1937) acknowledges the prominence of the local environment in the decision-making of enterprises. Coase (1937, 389) writes:

> *'Each factory ... plays his part as a single cell in a larger organism, mainly unconscious of the wider role he fills.'*

This citation expresses the idea of a world consisting of firms interacting with each other in local environments, unaware of the collective outcome of their individual decisions and actions following from them. Another example is Simon (1991, 27), characterizing societies by organizations and markets. In his account of the observations of a mythical visitor from Mars, organizations are characterized by 'lines of authority' and an important role is assigned to transitions in the boundaries of enterprises.

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[4] A recent study by Ang et al. (2005) shows the background of CEOs has an impact on their divestiture decisions.

> Suppose that it <a mythical visitor from Mars> … approaches the Earth from space, equipped with a telescope that reveals social structures. The firms reveal themselves, say, as solid green areas with faint interior contours marking our divisions and departments. Market transactions show as red lines connecting firms, forming a network in the spaces between them. Within firms (and even between them) the approaching visitor also sees pale blue lines, the lines of authority connecting bosses with various levels of workers. As our visitor looked more carefully at the scene beneath, it might see one of the green masses divide, as a firm divested itself of one of its divisions. Or it might see one green object gobble up another.'

We will analyse the evolution of the diversification portfolio of enterprises. The notion of orientation is introduced to study the evolution and directionality of the product portfolio of an enterprise. It determines to a certain extent which new product will be selected. The article is organized as follows. Section 2 presents the model. Section 3 formulates the results of orientation on the coherence of the multiproduct firm. They capture the first two stylized facts of Teece et al. (1994). Section 4 concludes.

2 Agent Based Model

Agent-based modeling is a methodology to investigate social dynamics. Agent Based Modeling is an extension of cellular automata. Basic features of cellular automata are the assumption of discrete space and locality. The world is modeled as a grid, the cells of which adopt a state from a finite set of states. The state of a cell changes according to transition rules. Agent based models extend the cellular automata model by adding the feature of a set of agents occupying the cells. These agents interact within well-defined spatial neighborhoods. Thus, the set of agents share a common habitat and at the same time, act autonomously based on information they receive from their local environment and their direct neighbors.

The two main ingredients of an agent-based model are the model of the agent and the transition rule(s) governing the actions of the agent. Each agent is characterized by a state, while decisions of agents are captured by transition rules. These transition rules produce a new state for each agent as a function of the current state of the agent and the state of each agent in the neighborhood of this agent.

Notice that there is no central authority that possesses an overview over the whole habitat and its inhabitants, nor is there an agent who in any way is capable of, or responsible for, the coordination of the actions of the individual agents. Manipulation of the macro level outcome may only be achieved by the careful and crafty influencing of the behavior of the individual agents and their way of influencing each other, i.e. by redefining the transition rules. For this to be successful, it is important to gain insight into the mechanisms responsible for the emergent outcomes of the social dynamics we are investigating, i.e. the diversification be-

havior of Ltd's and cooperatives. In this way the implications of the micro foundation of the agent for the macro behavior of the system of all agents has to be studied. Or in the words of Epstein and Axtell (1996):

> 'What constitutes an explanation of an observed phenomenon? […] Artificial society modeling allows us to "grow" social structures *in silico* demonstrating that certain sets of microspecifications are *sufficient to generate* the macro phenomena of interest.'

In this paper we will develop the agent model, consisting of the definition of the states the agent can be in, and the transition rule that governs the evolution of its state during a simulation run. Our ultimate aim is to investigate the dynamics of agents developing their product portfolio in a competitive environment with other agents. However, before we can hope to be able to interpret the complexities that will emanate from such a simulation, we need to have a clear picture of how the behavior of an individual agent evolves independent of the behavior of other agents. Therefore the model in this paper contains only a basic form of an agent-based simulation. At t=0, there is only one agent at grid point (0,0), which is allowed to diversify (i.e. add a new product to its portfolio) according to a predetermined transition rule (micro-motive).

2.1 Agent

Agents are characterized by their product portfolio and their orientation. A *product portfolio* consists of a set of products. Each product is represented as a cell in a two-dimensional grid. The distance between cells represents the similarity between products. Similarity between products exists along two dimensions, related diversification (horizontal dimension) and unrelated diversification (vertical dimension). The state of an agent is its product portfolio.[5]

The direction of an agents' diversification will be called its *orientation*. The orientation of an agent is defined as a subset of the Moore environment of each product cell. Only products in this subset have a positive probability to be added to the product portfolio. Fig. 1 presents the two possible orientations of an agent, where the agent is oriented on the shaded cells. The Moore neighborhood on the

[5] There are two major differences between Schelling (1978) and this paper. First, his model has a fixed number of agents of various types, the type of an agent does not change, and the state of each agent is modelled as a location. Our model has one agent, being one of two possible types / orientations. The state of an agent is formulated as an agent and all its descendants. (Hendrikse and Muijen (1998) present a model where the state of the agent is to a certain extent determined by the agents in the local neighbourhood of the agent.) Second, Schelling studies population dynamics, i.e. the interaction between agents, by having agents move to different locations when the number of foreigners in the local environment is above a certain threshold. We study the direction and evolution of the diversification portfolio of an enterprise.

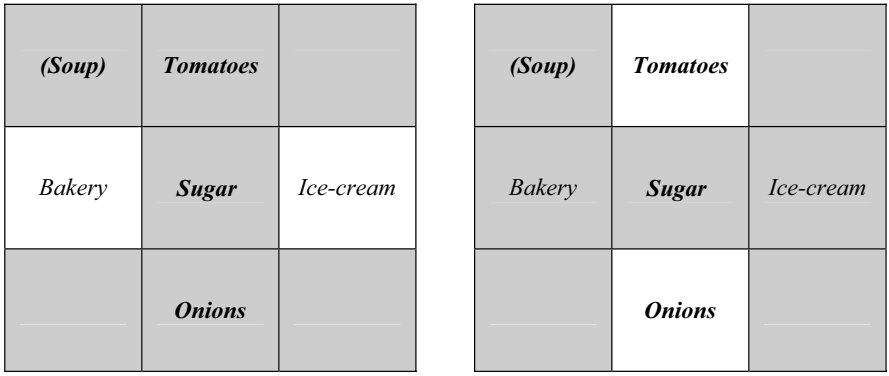


Fig. 1. Vertical direction / Unrelated diversification (Cooperative) versus Horizontal direction / Related diversification (Ltd)

left-hand side represents the vertical orientation of a Cooperative. Only two of the nine products in this square have probability 0 of being chosen in the next period. Products east or west of the cell in the center, i.e. horizontal, cannot be chosen. Similarly, the Moore neighborhood on the right-hand side represents the horizontal orientation of a Ltd. Only two of the nine products in this square have probability 0 of being chosen in the next period. Products north or south of the cell in the center, i.e. vertical, cannot be chosen.

2.2 Transition Rule

A *transition rule* produces a new state for each agent as a function of the current state of the agent and the state of each agent in the neighborhood of this agent. The new state consists of the portfolio of products in the previous period plus an additional product. This additional product is chosen out of the set of products covered by the orientation of all the products in the previous period. The actual choice is determined according a weighted probability distribution, where the weights are determined by how often a cell is covered by the orientation of each product in the portfolio. The mathematical formulation of this probability distribution is provided in the appendix.

Fig. 2 illustrates two periods of a simulation with an agent with a vertical orientation. In the grids on the left-hand side the development of the portfolio is shown. The grids on the right hand side show the weighed probability distribution determining the chance that a product is chosen in the next period. At the start of a simulation the portfolio of an enterprise consists of one single product. Diversification occurs by picking one of the products within the orientation of the current product portfolio. In the first period this amounts to choosing randomly between the seven products covered by the orientation of the agent in Fig. 1. Each cell within the orientation of the single product in the portfolio has an probability 1/7

Start:

0	0	0	0	0
0	0	0	0	0
0	0	1	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	1	1	1	0
0	0	1	0	0
0	1	1	1	0
0	0	0	0	0

Period 1:

0	0	0	0	0
0	0	0	0	0
0	0	1	0	0
0	0	1	0	0
0	0	0	0	0

0	0	0	0	0
0	1	1	1	0
0	1	2	1	0
0	1	2	1	0
0	1	1	1	0

Period 2

0	0	0	0	0
0	0	0	0	0
0	0	1	0	0
0	0	2	0	0
0	0	0	0	0

0	0	0	0	0
0	1	1	1	0
0	2	3	2	0
0	1	3	1	0
0	2	2	2	0

Fig. 2. An evolution of the product portfolio of a Cooperative during two periods

to be picked. Note that the product in the current portfolio is also contained in the set of possible new products. The reason for choosing a product that is already in the portfolio is that the production capacity for that product will be augmented by one unit. Suppose that the product south of the product in the starting portfolio is chosen at the beginning of the first period. In the right hand part of Fig. 2 we see that the choice set now contains 12 products. Two of these products are within the orientation of both products in the current portfolio. Therefore their chance to be picked is twice the chance of the other products. Suppose that in the second period the same product is chosen as in the first period. The bottom two grids show the portfolio and the weighed probability distribution at the end of the second period.

3 Results

In a first series of simulation runs we investigated whether the orientation of an agent has an impact on the final “shape” of its evolving product portfolio. Orientation of a diversification pattern can be determined by taking the average angle with the x-axis of all activities. An average angle of above 45% indicates a vertical

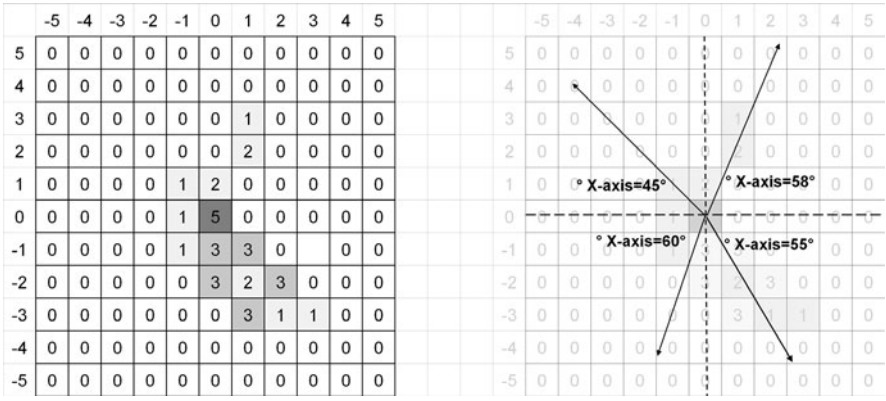


Fig. 3. Diversification profile of a Cooperative-orientation (1 run, 30 periods/run)

orientation, while an average angle of below 45% indicates a horizontal orientation. Finally, an angle of exactly 45% means that there is no specific orientation in the activities. A graphical representation of this idea is given in the right hand side of Fig. 3. The left-hand part of the figure presents a product portfolio / diversification pattern, the result of one run and 30 diversification periods. A summary statistic of the final shape of this portfolio is the Weighed Average Angle with the X-axis of the portfolio. This value is calculated by taking the average angle of the current activities in each 4 quadrants. Next, one calculates the weighed average value of these 4 values (more activities in a quadrant lead to more weight in the total number). The procedure is shown graphically in the right hand part of the figure.

The pattern in Fig. 3 is the result of one simulation. The shape is clearly vertical, which is in line with the vertical orientation of the agent. However it is also skewed downwards. This can be explained by the relative importance of the first diversification step. In this case this step was straight downward, which gives the profile a tendency towards the bottom. Averaging across a number of simulation runs shows a more stylized pattern, like Fig. 4.

The different diversification profiles of Cooperatives and Ltd can be clearly distinguished. Compared to an indifferent orientation, which has a weighed average angle with the X-axis of 45°, the Cooperative has an angle of 45+7°, while the Ltd has an orientation of 45-7°. These results are in line with the different micromotives of the Cooperative and Ltd. However, if one increases the number of periods per run, the average angle with the X-axis slowly tends towards the 45°. This is caused by the increasing influence of "back leaping". This phenomenon is illustrated in Fig. 5 and can be described as follows. A Cooperative has a tendency to diversify upwards and downwards, compared to an Ltd. If the number of periods is limited, a relatively large number of products is generated above and below the origin. However, this tendency is reversed when the number of periods increases. An increasing number of periods decreases the expected vertical tendency.

	-5	-4	-3	-2	-1	0	1	2	3	4	5
5	0	1	0	1	1	0	0	0	0	0	0
4	0	1	2	6	3	2	4	0	0	0	0
3	1	0	3	13	14	16	11	6	0	0	0
2	0	2	6	16	33	41	38	14	1	1	0
1	0	1	8	17	67	79	88	29	11	0	0
0	0	1	4	32	53	197	56	44	3	3	0
-1	0	0	2	18	96	88	81	29	13	1	1
-2	0	0	1	17	42	56	33	23	7	4	0
-3	0	1	6	5	19	11	21	14	8	1	0
-4	0	1	1	1	2	3	4	8	1	0	0
-5	0	1	0	0	0	0	0	0	1	0	0

Weighed average angle X-axis=52,3°

	-5	-4	-3	-2	-1	0	1	2	3	4	5
5	0	0	0	0	0	0	0	0	1	0	1
4	0	0	0	0	0	0	1	1	0	1	0
3	0	0	2	3	8	4	5	2	4	1	0
2	0	4	6	15	28	42	21	15	7	1	2
1	0	3	11	40	89	73	81	33	21	6	0
0	2	3	19	50	97	173	79	70	15	3	3
-1	0	5	17	37	90	65	77	29	14	5	0
-2	0	2	7	23	28	31	18	19	6	2	0
-3	0	1	4	4	7	2	7	0	2	0	0
-4	0	0	0	0	0	1	0	1	0	0	0
-5	0	0	0	0	0	0	0	0	0	0	0

Weighed average angle X-axis=37,9°

Fig. 4. Diversification profiles of a Cooperative (left) and an Ltd (right) = (50 runs, 30 periods/run)

	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6
6	0	0	0	0	1	0	1	3	0	2	0	0	0
5	0	0	0	0	6	6	6	6	4	1	0	0	0
4	0	3	2	11	14	25	27	22	19	8	8	1	0
3	0	1	23	20	34	48	64	45	50	25	8	4	0
2	0	3	19	35	78	111	145	100	69	27	20	1	1
1	0	5	9	44	105	226	217	199	112	65	7	6	0
0	0	2	17	35	135	185	338	184	144	40	14	1	3
-1	0	1	11	49	71	182	206	215	83	47	10	2	3
-2	0	2	10	20	71	104	124	108	90	30	9	1	0
-3	1	4	5	19	25	45	51	59	38	20	3	1	1
-4	1	0	1	8	14	17	10	14	20	5	3	1	0
-5	0	0	1	2	3	1	4	1	8	4	0	0	0
-6	0	0	0	0	1	0	1	4	0	2	0	0	0

Weighed average angle X-axis=43,3°

Fig. 5. Diversification profiles of a Cooperative-orientation (50 runs, 100 periods/run)

It is hard to identify a diversification profile in Fig. 5, which is caused by the blurring effect of many cycles per run. An extension of the model counteracting the influence of back leaping is the introduction of termination of an activity (product) after a certain number of cycles. This feature turns out to guarantee a clear distinction between a Cooperative-orientation and an Ltd-orientation at much higher numbers of periods, as shown in Fig. 6.

	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6
6	0	0	0	1	0	1	0	4	5	1	0	0	0
5	0	0	1	4	3	5	12	3	9	1	0	0	1
4	0	0	0	5	8	11	14	21	10	8	1	1	0
3	0	0	2	9	12	19	34	25	19	10	3	0	1
2	0	2	8	19	18	39	46	41	31	13	3	1	0
1	1	4	8	14	33	61	58	59	35	20	9	3	3
0	1	1	10	20	31	50	76	77	37	18	7	1	2
-1	0	2	7	17	42	53	51	57	51	17	4	1	0
-2	1	1	6	15	29	39	52	49	30	19	3	2	4
-3	0	1	2	9	25	29	29	31	17	12	7	1	2
-4	0	3	4	10	7	19	13	12	4	8	1	0	2
-5	0	4	7	1	7	7	8	5	7	0	0	0	0
-6	0	1	0	2	7	3	2	3	0	0	0	0	0

Fig. 6. Diversification profile of a Cooperative-orientation (50 runs, 100 periods/run, activities are terminated after 50 cycles)

4 Conclusion

The contribution of this article is twofold. First, the notions of orientation and coherence are made operational with the agent-based methodology. A horizontal and a vertical direction in orientation are distinguished in order to be able to apply this concept in a diversification setting with related and unrelated products. Coherence between current and new products in a diversification portfolio is captured by having new products selected in the Moore-environment of the current products. The relationship between orientation and coherence is that orientation determines the likelihood of selecting new products in the (Moore) neighborhood of the current products. Second, the impact of orientation on the evolution of diversification portfolios is analyzed. Our specification of orientation with the agent-based methodology shows a significant impact of orientation on the directionality of a diversification portfolio.

The approach in this article is able to account for the stylized facts that firms begin as single product and subsequently become multiproduct and that they maintain a constant level of coherence between neighboring activities. The third stylized fact that firms not only add businesses, but that they also commonly divest, is not captured. However, this can be easily incorporated in the model. For example, a bound regarding the age of products can be incorporated, and motivated by idea of a life cycle of products. Another way to incorporate divestiture is that not only new products are born, but that existing products may also die due to either too much competition or being too isolated. Too much competition entails that a bound is introduced on the number of products in one location, whereas being too isolated from the ma-

jority of products in the diversification portfolio may be captured by having a larger Moore-neighborhood. Similar extensions can be formulated to incorporate stylized facts that we did not include in our summary of Teece et al. (1994), for example, that there often appears to be a degree of circularity to the fashion in which new businesses are added and subsequently divested, and that new product lines very often utilize capabilities common with existing product lines.

This article is inspired by the result of Van Oijen and Hendrikse (2002) that governance structure matters for the directionality of corporate coherence. The directionality of corporate coherence is addressed, but the driving force is not an aspect of the governance structure investor-owned enterprise or cooperative, but the orientation of agents in these governance structures. The next step is to highlight a feature of these governance structures causing different directionality by itself, independent of the orientation of the agents inhabiting these governance structures. One possibility is to introduce a distinct role for the society of members of a cooperative. For example, the current model selects a new product based on a weighted probability distribution, where the weights are determined by the orientation of all products. All products covered by at least one orientation have therefore a positive probability of being chosen in the next round. This seems to be closer to a corporation than a cooperative because products are relatively independent. A cooperative may be better represented by a truncated weighted probability distribution in order to reflect that some support from the society of members is needed for new activities. A subsequently step will be to study the impact of the interaction between orientation and governance structure on the direction of corporate coherence. These steps are to be viewed as an attempt to formulate a contribution to the field of behavioral governance structure choice.[6]

Another direction for future research is to incorporate the interaction between products as well as enterprises. The current model endows each product only with the feature of generating a new product in the next period. There is no interaction between the products in the portfolio of an enterprise and the portfolio of products is lacking the rivalry of another portfolio of products. This article presents therefore a model of an agent, i.e. a micro foundation for (the evolution of) the firm, rather than an agent-based model, i.e. an account of the outcome of many interacting agents. However, modeling the interaction between products, within and between enterprises, can be incorporated in the transition rules guiding the selection of new products. Extending the model in this direction allows for addressing the impact of competition between governance structures on the size and directionality of diversification portfolios. It will allow for studying the stylized fact that cooperatives and investor owned enterprises coexist in many agricultural and horticultural markets. The viability of this industry structure is poorly understood.

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[6] Behavioral governance structure choice is viewed as part of the field of behavioral economics. Behavioral economics relaxes the standard assumptions of homo economicus by considering the impact of bounded rationality, bounded willpower, and bounded self-interest. Orientation, and how it is channeled by governance structure choice, is to be positioned in the realm of bounded rationality.

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Appendix: The Transition Rule of a Cooperative and a Ltd.

Every period one product is added to the product portfolio. The transition rule of each enterprise is characterized by a weighted probability distribution regarding the current product portfolio. It is therefore defined recursively. Define (i(k),j(k)) as the position of the new product in period k. The weighted probability distribution X(k,i,j)/7(k+1) determines (i(k),j(k)), where X(k,i,j) is the number of times cell (i,j) is 'hit' by the orientation of each product in the product portfolio at the end of period k-1. Define X(0,i,j)=0 for every i and j.

A1 The Transition Rule of a Cooperative

X(k+1,i,j) = X(k,i,j)+1, when (i,j)?{(i(k)-1,j(k)-1), (i(k)-1,j(k)+1), (i(k),j(k)-1), (i(k),j(k)), (i(k),j(k)+1), (i(k)+1,j(k)-1), (i(k)+1,j(k)+1)}, i.e. being hit by the orientation of the new product in the previous period adds 1 to X(k,i,j), where the orientation of a cooperative is characterized by the left-hand side of Fig. 1.

X(k+1,i,j) = X(k,i,j) otherwise, i.e. X(k,i,j) remains the same when cell (i,j) is not hit by the orientation of the product added in period k.

A2 The Transition Rule of a Ltd

X(k+1,i,j) = X(k,i,j)+1, when (i,j)?{(i(k)-1,j(k)-1), (i(k)-1,j(k)), (i(k)-1,j(k)+1), (i(k),j(k)), (i(k)+1,j(k)-1), (i(k)+1,j(k)), (i(k)+1,j(k)+1)}.

X(k+1,i,j) = X(k,i,j) otherwise.

A3 Evolution

Period 0: A product is positioned in the center of the grid.

Period k: A new product (i(k),j(k)) is selected based on the weighted probability distribution X(k,i,j)/7(k+1).

Organization and Strategy of Farmer Specialized Cooperatives in China

Yamei Hu, Zuhui Huang, George Hendrikse, and Xuchu Xu[1]

Abstract. How are the new farmer specialized cooperatives in China organized? This question is addressed by presenting data at three levels. First, data are presented regarding the historical development of farmer cooperatives in China. Second, data are presented regarding the membership composition of a sample of 66 farmer cooperatives in the Zhejiang province. Third, data are presented regarding the various attributes (governance, quality control system, and strategy) of a watermelon cooperative in this province. Many cooperatives are being transformed in organizations with a market orientation. The data indicate that cooperatives exhibit substantial heterogeneity, in terms of farmers being member and skewness in the distribution of control rights. Human asset specificity in terms of establishing and maintaining relations and access to markets seems to be more important than physical asset specificity in accounting for governance structure choice in the current institutional setting.

Keywords. Farmer cooperative, China, governance

1 Introduction

The economic organization of agriculture is a timely research topic. Among other organizational forms, cooperatives have always been a prominent organizational form. Broadly defined, a cooperative is an organizational form of many independent growers (horizontal relationship) who jointly own a downstream processor/ retailer (vertical relationship). Cooperatives are important to agriculture in developed as well as developing countries. For example, there are 132,000 cooperatives

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with 83.5 million members and 2.3 million employees in the European Union in 2001, 47,000 cooperatives with 100 million members in the United States of America in 2001, and 94,771 cooperatives with 1,193 million members in China in 2002.

Studying agricultural cooperatives in China is of particular interest for three reasons. First, as noted by new institutional economists such as North and Williamson, the *institutional environment* interacts with the governance structure of firms. Menard and Klein (2004, 750) point out, 'These background conditions should not be regarded merely as constraints that hamper modernization. They also create incentives for the discovery of more efficient modes of organization. Comparing firms across different institutional environments to see what settings facilitate organizational innovation and what settings hamper it contributes dramatically to our understanding of the dynamics of a market economy'. The institutional environment in a transition country like China is quite different from those in developed countries such as U.S.A and Western European countries. China provides the necessary variety in institutional environment in order to gain insight in the relationship between the governance of enterprises and the institutional environment.

China's economy is unique in many aspects. There are more than 200 million farmer households (i.e. a vast population of 0.8 billion farmers), each farming a plot of land that is similar to a garden plot elsewhere. For these small farmers, a major problem in the transition period is the breakdown of the relationships of the farm with input suppliers and output markets. They face serious constraints in accessing essential inputs, such as feed, fertilizer, seed, capital, and in selling their products. Our main research question is therefore: How are the new farmer specialized cooperatives in China organized?

This descriptive question will be addressed at three levels. They are inspired by the levels of institutional analysis distinguished by Williamson (2000). The most general level is Embeddedness, where informal institutions, customs, traditions, norms, and religion are at the center of analysis. Change occurs only once in 100-1000 years. The Institutional Environment is concerned with the formal rules of the game, like bureaucracy, polity, and the judiciary. Change occurs in 10-100 years. Governance is about contracting and aligning governance structures with transactions. Changes occur in a time frame of 1-10 years. The first level requires investigating whether the Chinese cultural and institutional background matters for the cooperative as a governance structure? We will provide a brief history of farmer cooperatives in China.

Second, compared with stock listed corporations, cooperatives have their own salient characteristics such as member-ownership and member-control (Staatz 1987; Vataliano 1983; Cook 1995; Hendrikse 1998; Hendrikse and Veerman 1997). However, these characteristics are described and examined mainly against the background of developed economies/agricultural sectors. Are these characteristics also descriptive of agricultural cooperatives in countries in *transition*? Since the late 1980s, new farmer cooperative organizations have emerged and developed rapidly

all over China. These new cooperative organizations are quite different from the cooperatives in the 1950s and 1960s. What are the governance structure choices in these cooperative organizations? What are the factors driving such choices?

Third, appropriately organizing the farmers into the agricultural *chain of production*, transaction and consumption will not only benefit farmers but also benefit the overall performance of the economy. As China entered WTO, world industrial markets as well as agricultural markets have been affected by this vast economy. The study on how to organize and position Chinese farmers in agricultural supply chains is meaningful for the health of the Chinese economy as well as the world economy. Are Chinese cooperative organizations a feasible organizational form to the organization of farmers in an increasingly global agri-food supply chain? We address this question from the perspective of systems of attributes (Milgrom and Roberts 1995). Attributes like decision rights, income rights, quality control systems and branding are distinguished.

Addressing these questions contributes to the literature on comparative institutional analysis as well as to the theory of the firm. The article is organized as follows. Section 2 describes the history of farmer cooperatives in China (2.1), i.e. Institutional Environment, and Chinese society (2.2), i.e. Embeddedness in the terminology of Williamson (2000). This provides the background for our study. Section 3 is institutional analysis at the level of Governance. It presents the data regarding 66 farmer cooperatives in Zhejiang province. In section 4, we will enrich the observations of section 3 by describing the interaction between the attributes governance structure, strategy, and quality control system of a specific cooperative. In section 5, we look at these developments from a number of theoretical perspectives and formulate various conclusions. Section 6 concludes.

2 Farmer Cooperatives in China During the Last Century

This section consists of two parts. We start with a brief history regarding cooperatives in China in subsection 2.1. Subsection 2.2 is dedicated to a number of observations regarding Chinese society because it plays a role in understanding farmer cooperatives in China.

2.1 One Century of Cooperatives in China

Cooperative organizations are not new phenomena in China. Their history dates back to the beginning of the twentieth century. Five periods are distinguished. First, cooperatives emerged in some part of China as early as in 1920s. Cooperatives experienced a rapid increase from 722 in 1928 to 168,864 in 1948 (Du 2002, p.299). There is no detailed information regarding farmer cooperatives during this period, but it is clear that they were quite different from what we see today. One main reason is land ownership. Independent farmer households were the conven-

tional farming units in the rural China. Landlords owned 40% of the cultivated rural land, and leased it to farmer households at a very high rent. The rent was often as high as 50% of the value of the crops.

Second, New China was established by the Communist Party coming to power in 1949. The central government gradually confiscated land from landlords and rich farmers, and then distributed it for free to poor and landless farmers. At the same time, to help farmers, who were short of tools and skills, to grow crops efficiently, various kinds of cooperative organizations were set up, motivated and later even directly organized by the government, to pool resources. Among many cooperative forms, 'the Mutual Aid Team' was most popular. On the basis of voluntary participation, four or five neighboring households pooled farm tools and draft animals and exchanged labor on a temporary or permanent basis, while land and harvests still belongs to individual households. From 1949 to 1955, the cooperative form of 'Mutual Aid Team' was adopted as the primary way to pool resource in order to increase production.

Third, from 1955 to 1979, the so-called 'Cooperative Movement' took place, and cooperative organizations were gradually deprived of their voluntary character and became a way for the government to centrally control and manage agricultural production, exchange and consumption. Agricultural production became collectivized. The 'Elementary Co-operative' emerged in 1954 and was the main choice of farmers during 1954 to 1956. Compared to the Mutual Aid Team, more households (normally 20 or 30) participated in the Elementary Co-operative, and members pooled their land, besides farm tools and draft animals, together under a unified management. The net income of the co-operative was distributed according to two principles: one payment for the input of land, draft animals, and farm contributed by each member; one payment for the labor input by each member. In this period, the attitude towards the cooperative development was cautious, and farmers were encouraged to participate in different kinds of cooperative organizations on voluntary basis.

Among the various cooperative forms, 'the Advanced Co-operative' emerged around 1955, having a number of salient characteristics. All means of production including land were collectively owned, and members worked according to centralized management, and remuneration was solely based on the labor input from each member. In 1955, the central government decided to accelerate the pace of collectivization. As a result, the voluntary participation principle was deliberately omitted and farmers were persuaded or forced to participate in the Advance Co-operative. From 500 Advance Co-operatives in 1955, the number rose toward 753,000 in 1957, covering 119 million households.

In 1958 a new form of cooperative, the so-called 'People's Commune' was introduced and played a decisive role in rural areas until 1978. One 'People's Commune' consisted of about 30 Advanced Cooperatives and consisted of, on average, 5,000 households and 10,000 acres of cultivated land. Unified production, management and distribution were adopted within the People Commune. Initially, payments in the commune was based partly according to subsistence needs and

partly according to the work performed. However, delegation of production and management to smaller units, i.e. the 'Production Team' which consisted of about 20-30 neighboring households, occurred in 1962. Since then, production teams were the basic producing, operating and accounting unit. Team members grow crops together, and working time was recorded under the title of 'Working Points'. At the end of year, income was distributed to individual members according to accumulated working points. The system of collective farming remained until 1979.[2]

Under the system of collective farming, supplying of farming inputs, producing and selling products are all centrally planned by governments. The so-called 'Supplying and Marketing Cooperatives' in rural areas were government organizations which supplied inputs and consumption goods to farmers. Agricultural products were collected and distributed by governments, and were normally not allowed to trade freely in markets. In general, before 1980s, the 'Unified Purchasing and Supplying System' (UPSS, i.e. 'tong-gou-tong-xiao' in Chinese) was adopted as the basic institution governing government and farmers regarding producing sales of agricultural products until early 1980s.[3]

Fourth, China started an economic and political transition in 1978. Central planning of economic activities was gradually transformed to a market-oriented system. This ongoing institutional change has far-reaching influences for individuals as well as organizations. Firstly, the collective-based farming has been substituted by family-based farming. The Household Responsibility System (HRS) was initially adopted in 1978 by the farmers in An'hui province and provided the farmers with temporary control and income rights to land. The HRS is characterized by collective ownership of land on the one hand and farmer households as independent producing units on the other hand. The land is collectively owned by villages, while is leased to the households according to the number of people and workers in a household. The tenure specified in the contract was set to be one to three years at first, and then was extended to 15 years. In 2002, the contract duration for a new round was re-extended to 30 years. The contract specifies the household's obligations to fulfill state procurement quotas and to pay various forms of local fees and taxes. The household then retains any residuals in excess of the stated obligations. It induces strong incentives for farmers to work and invest in the leased land. For example, as the reforms spread rapidly across the other parts of the rural areas, farm output rose by more than 30% in six years.

Secondly, the centrally planned agri-food purchasing and supplying system was gradually transformed to a market-oriented system. As the reform on rural land went on, UPSS was progressively abandoned by the government to encourage free

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[2] The cooperative organizations in 1960s and 1970s were not farmer-owned and farmer-controlled by nature. They turned into government or quasi-government organizations performing both economic and political functions.

[3] The central government decided to take 'planned purchasing and planned supplying' on oil agri-products and grain on November 1953, and expanded the planning spectrum to include cotton on September 1954. The policy issued on August 1955 specified the details.

trade in agricultural markets. As early as 1982, the government encouraged farmers to sell products in markets. In 1985, the central government decided to cancel UPSS.[4] Since then, the government purchases grain and cotton by contracting, and pork, sea-food, vegetables and other products are open to free trade.

As China transits from centrally-planned economy to market-oriented economy, traditionally small farmers are facing a new situation. Under the old collective producing and distribution system, farmers did not decide what to produce, how much to produce, and how to sell products. In the transitory period, they have to make these decisions by themselves. However, it is not easy to successfully make such decisions. The survival of farmers depends on how, and to what extent, they meet the demands of final consumers. It implies that they have to produce efficiently on the one hand, and to predict and meet market demands on the other hand. However, it is well known that small farmers lack access to inputs, technology, information, and markets. This puts them in a weak position in supply chains. Choosing appropriate strategies, which provide the access to inputs, technology, information, and markets and to added value of supply chain, is therefore crucial to them.

Motivated by the new situation since the 1980s, new cooperative organizations emerged in many provinces of China in the late 1980s. At the beginning, the cooperative organizations, called the 'Technology Association', were established to communicate and promote new technologies among farmers. Local technologists, big specialized growers, and science associations were major players initiating and organizing such cooperative organizations. As the reform of the agricultural product circulation system proceeded in the 1980s, more farmer cooperative organizations emerged. Some cooperative organizations operate across different production stages, such as supplying agricultural inputs and/or selling products. At the same time, more players are involved in establishing cooperative organizations, such as large processing enterprises, state-owned supplying and marketing cooperatives, local rural governments, and villages etc. Since the 1990s, the development of cooperative organizations is speeding up in many provinces. Up to 2004, the number of new cooperative organizations is more than 150,000 (RDI CASS and RSECT NBSC [5], p157).

The new cooperative organizations that have emerged since the 1980s may take different forms. In general, we can distinguish two basic forms: farmer specialized associations and farmer specialized cooperatives. Farmer specialized associations account for 65% and farmer specialized cooperatives account for 35% of the 150,000 cooperative organizations in 2004 (RDI CASS and RSECT NBSC, p.157). The main difference between the two forms is the ownership of fixed assets and performing functions like production, marketing, or processing. In gen-

[4] 'Ten Policies on Further Activate Rural Economy', issued by the Central Committee of the Communist Party and State Council on January 1, 1985, specified the details.

[5] RDI CASS is the abbreviation for Rural Development Institute Chinese Academy of Social Sciences, and RSECT NBSC is the abbreviation for Rural Social and Economic Census Team National Bureau of Statistics of China.

eral, specialized cooperatives are registered at the Administration of Industry and Commerce, have fixed assets, and are like cooperatives in western countries in terms of their production, marketing, and processing activities. Farmer specialized associations are registered at the Civil Affairs Bureau, have no fixed assets, charge no membership fee, provide some technical assistance, and share information. However, this distinction is too crude. The Farmer Specialized Association' (FSA) is a very broad name, which consists of very large association supplying technology, information, to thousands or tens of thousand members as well as very small associations communicating technology and experience among several farmers. Some specialized associations are even cooperative enterprises and acts just like specialized cooperatives. This overlap can be explained partly by the fact that there are no cooperative laws in China. Up to May 2005, there are no national cooperative laws. At the provincial government level, local laws on cooperatives are also limited. The first local cooperative law was enacted by the Zhejiang provincial government in January 2005.

2.2 Chinese Society

Farmers choose a certain organizational form (i.e., a governance structure) to realize a fair return on investment. This choice is not independent of the society in which the farmer lives. It is important to realize that a person is not only a natural or economic person, but also a social person. He (she) lives in a society, which can be viewed as a nexus of various relations. This is particularly true for Chinese farmers with characteristics like community life, influence of traditional culture, and the imperfections of the current market system. There are three basic ways for most of Chinese farmers to participate in the society. The first is kinship, i.e., the relations between an individual and his or her spouse, parents, sisters and brothers, and cousins. The second is social relations, i.e., the relations between an individual and his or her friends, classmates, and colleagues. The third is potential relations, i.e., the relations between an individual and strangers; it is actually based on the first two relations.

The origin and development of farmer cooperatives in China have therefore an informal institutional background based on relations. The kinship (or relation) plays an important role in the cooperatives. First, as an organization based on the rural communities, the farmer cooperative is characterized by kinship. Second, the kinship is an important way for Chinese farmers to access to various resources. It's particularly important at the initial stage of farmer cooperatives. Third, the governance and operation of farmer cooperatives also relies on the principle of kinship. It's a principle combining kin, loyalty and abilities. Therefore, it's natural for the farmer cooperatives to have some characteristics of traditional social relations in the process of their development and operation. Such rural social relations are combined by kinship and market rules. A lot of farmer cooperatives in Zhejiang province find an effective balance in such social relations. The internal transaction costs based on such relations is quite low.

3 Farmer Cooperatives in the Zhejiang Province

This section presents the data of a sample of 66 farmer cooperatives in Zhejiang province in China. Zhejiang province is located south of Shanghai, with 46 million inhabitants. It was the pilot province for farmer specialized cooperative organizations chosen by the Ministry of Agriculture, China. To a certain extent, the institutional arrangement of farmer cooperatives in Zhejiang not only reflects the common characteristics of farmer cooperatives in the coastal areas of China, but may also represent the development trend of farmer specialized cooperatives in China.

Farmer cooperatives in Zhejiang have experienced a rapid development since 1990s. Like other regions in China, Zhejiang's farmer cooperatives can be divided into specialized cooperatives and specialized associations. Both specialized cooperatives and specialized associations have increased rapidly, however, specialized cooperatives increase at faster rate than specialized associations. The farmer specialized cooperatives increased from 791 in 2002 to 1,789 in 2004. The number of farmer specialized associations was 1,019 in 2004. The total number of the farm households joined in farmer cooperatives reached 554,000 and the total number of the farm households involved in farmer cooperatives reached 2,029,500 in 2004.[6]

A sample of 66 farmer specialized cooperatives was chosen randomly from the Zhejiang province. Data regarding membership and ownership were collected by face to face interviews and archival research. Table 1 shows the number of members, the number of shareholders, the capital stock, the capital stock per-capita, the ratio of shareholders to all members and the shareholding concentration rate.[7]

Table 1. Ownership structure of 66 sample cooperatives

Co-ops	No. of member	No. of share-holder	Capital stock [¥]	Per-capita capital stock [¥]	Share-holders to members	R_1	R_3	R_5	R_8	R_{10}
Max value	1000	812	7010000.00	584166.67	1.00	0.82	1.00	1.00	1.00	1.00
Min value	36	2	6800.00	47.22	0.01	0.00	0.01	0.01	0.02	0.02
Mean value	259.318	102.485	365089.00	23001.77	0.45	0.25	0.44	0.55	0.64	0.67
Standard deviation	216.944	144.910	896312.41	75027.32	0.42	0.22	0.29	0.32	0.32	0.32

[6] Source: Zhejiang Provincial Department of Agriculture.

[7] Shareholding concentration (*Ri*) refers to the ratio of the sum of the capital stock owned by the top *i* member(s) in a descending sort to the total capital stock in a cooperative. In detail, $R_m = \sum_1^m X_i \Big/ \sum_1^n X_i \quad (m \le n)$; Where *Xi* refers to the sum of the capital stock owned by the top *i* member in a descending sort; where *N* refers to the number of cooperative members.

Several observations can be formulated regarding table 1. Firstly, in our sample of 66 farmer cooperatives, the size of cooperatives varies a lot. In terms of membership, the largest cooperative has 1,000 members, while the smallest cooperative has just 26 members. In terms of capital stock, the cooperatives vary from as low as 6,800 yuan to over 7 million yuan. Table 2 provides the additional information regarding the size distribution of cooperatives. The number of cooperatives with more than 500 members and the cooperatives with less than 100 members are limited. Over half of cooperatives have more than 100 and less than 200 members.

Table 2. Interval distribution of number of members

No. of members	＞800	＞500	＞300	＞200	＞100	＞50	＞0
No. of co-ops	4	8	20	27	62	65	66
Frequency [%]	6.06	12.12	30.30	40.91	93.94	98.48	100.00

Secondly, according to table 1, all cooperatives have shareholders. However, the numbers of shareholders of the sample cooperatives varies also drastically. The number of shareholders varies from 2 to 812. Table 3 illustrates the interval distribution of the number of shareholders in our sample. The cooperatives with more than 200 shareholders and these with less than 5 shareholders are fairly limited. 20 cooperatives, almost one third of the sample, have between 100 and 200 shareholders; 26 cooperatives, over one third of the sample, have between 5 and 30 shareholders.

Table 3. Distribution of the number of shareholders

No. of shareholders	＞200	＞100	＞50	＞30	＞10	＞5	＞0
No. of co-ops	9	29	31	34	48	60	66
Frequency [%]	13.64	43.94	46.97	51.52	72.73	90.91	100.00

Thirdly, the capital stock of the cooperatives varies between 7,000 and 7,000,000 yuan; and the per-capita capital stock varies between 50 and 50,000 yuan. Table 4 shows the interval distributions of capital stock and per-capita capital stock. Regarding capital stocks, only two cooperatives held a capital stock of more than 1,000,000 yuan, and the cooperatives with a capital stock of more than 500,000 yuan are limited. For about one third of the cooperatives, their capital stock is between 10,000 and 200,000 yuan. Regarding per-capita stock, about one third of cooperatives have more than 10,000 yuan per-capita capital stock, and about one third of cooperatives have a per-capita capital stock between 1,000 and 5,000 yuan. There is only one cooperative with less than 100 yuan per-capita capital stock, and

there are quite a few cooperatives whose per-capital capital stock is between 100 and 1,000 yuan.

Fourthly, shareholding among members is pervasive. However, member shareholding varies a lot. The rate of shareholders to members is as large as 1 at one extreme and as small as 0.01 at the other extreme, with the mean value being equal to 0.45 (see column 6, table 2). Table 5 further shows the detailed information on members' shareholding. There are strong contrasts on the member shareholding structures in the sample. In 21 cooperatives, the rate of shareholder members to all members is higher than 90%; in 24 cooperatives, this rate is lower than 10%, and in 15 cooperatives, this rate is between 10% and 50%. These cooperatives therefore can be divided into two groups: one group with high member shareholding, and the other group with low member shareholding.

Table 4. Interval distributions of capital stock and per-capita capital stock

Capital stock [10,000¥]	＞100	＞50	＞20	＞10	＞5	＞1	＞0
No. of co-ops	2	8	27	42	54	65	66
Frequency [%]	3.03	12.12	40.91	63.64	81.82	98.48	100.00
Capital stock per-capita [¥]	＞10000	＞5000	＞1000	＞500	＞200	＞100	＞0
No. of co-ops	21	26	54	60	62	65	66
Frequency [%]	31.82	39.39	81.82	90.91	93.94	98.48	100.00

Table 5. Interval distribution of the proportion of shareholder members to all members

Proportion of shareholder members to all members	>0.9	>0.8	>0.7	>0.6	>0.5	>0.4	>0.3	>0.2	>0.1	>0.0
No. of co-ops	21	23	25	27	27	28	28	36	42	66
Frequency [%]	31.83	34.85	37.88	40.91	40.91	42.42	42.42	54.55	63.64	100

Fifthly, shareholding is not uniformly distributed among shareholders, and large shareholders' dominance in the provision of capital is salient. Table 1 shows, on average, the top 5 largest shareholders account for 50% of the provision of capital in a cooperative, and the top 10 largest shareholders contribute for almost two thirds of the capital stock. Table 6 further captures how shareholdings are concentrated in cooperatives. In 11 cooperatives, the largest shareholder provides more than 50% of equity capital; in 25 cooperatives, the top three largest shareholders

Table 6. Concentration of shareholding

	R_m> 0.9	R_m > 0.8	R_m> 0.7	R_m> 0.6	R_m > 0.5	R_m > 0.4	R_m > 0.3	R_m > 0.2	R_m > 0.1	R_m > 0.0
R_1	0	1	4	5	11	17	21	26	45	66
R_3	5	9	15	20	25	31	39	47	59	66
R_5	14	18	24	28	33	40	47	57	59	66
R_8	22	26	31	37	40	49	53	58	60	66
R_{10}	26	31	35	40	42	51	55	58	62	66

provide more than 50%; the top 5 largest shareholders provide more than 50% of equity capital in half of the sample cooperatives.

In sum, most cooperatives are small; shareholding is pervasive among most cooperatives; the cooperatives are usually composed of a minority of core members (usually big shareholders) and a majority of common members (usually users or patrons); the cooperatives can be generally divided into two types: one is with a minority of members as its shareholders; the other is with a majority or all members as its shareholders. For most cooperatives, shareholding is quite concentrated; big shareholders play a dominant role in providing capital.

4 Wenling City Yu-heng Watermelon Cooperative

In this section, we will examine a specific cooperative in the Zhejiang province in order to enrich the observations of the previous section. Wenling City Yu-heng Watermelon Cooperative (we call it Yu-heng watermelon cooperative hereafter) is located in Yuheng town, Wenling city, Zhejiang province.[8] It was initiated in July 2001 by 29 farmers including the present General Director, and was registered as a share-cooperative enterprise by the local Industry and Commerce Administration in February 2002. The main business of the cooperative involves growing and selling watermelons.[9] In 2004, it had 129 members with the fixed capital of 2.96 million Yuan.

Organizations, and therefore cooperatives, can be characterized in many different ways. We adopt the systems of attributes characterization of Holmstrom and Milgrom (1994). Three clusters of attributes are distinguished in describing this cooperative: governance structure (4.1), quality control system (4.2), and strategy (4.3). We conclude the section by paying attention to the complementarities between these attributes (4.4).

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[8] Wenling is a city of 780,000 citizens in Zhejiang province, China; Yuheng is a town south of Wenling.

[9] It also sells farming medicines, fertilizer, etc as a side business.

4.1 Governance Structure

We follow Hansmann (1996) by distinguishing decision and income rights of a governance structure. Decision rights specify who directs the firm's activities, i.e. the allocation of authority. Various decision rights in Yu-heng watermelon cooperative will be described, like membership composition, share contribution requirement, restricted ownership, delivery rights, quasi-individual ownership title, formal versus real authority, and member involvement. Income rights specify who appropriates the net earnings of the enterprise, i.e. delineate incentives.

4.1.1 Decision Rights

Yu-heng watermelon cooperative has 129 members. Most members are watermelon growers and about 20 members are watermelon sellers. The cooperative requires all members to buy shares, where the number of the shares which members have to buy is determined by the planting scale. The larger the planting scale is, the more shares a member has to buy. However, the maximum shareholding for one member is set to be 20%.

Membership is closed in this cooperative. Although the charter stipulates the membership policy as 'free entry and free exit', the practice of membership is different. On the one hand, to become a member, farmer growers have to reach a certain scale of growing watermelons and have to meet a certain technical requirement. The cooperative is very cautious to accept new members. For example, the cooperative will monitor the performance of a potential member for one year before making a final decision. On the other hand, to leave the cooperative, current members are required to submit a written application to the cooperative. The member can get their equity investment back when the application to leave is accepted by the board of directors. However, current members are not allowed to leave when the cooperative is experiencing losses.

Delivery rights are restricted in Yu-heng watermelon cooperative. Firstly, delivery rights are restricted in terms of quality requirements. Members have rights to deliver products to the cooperative, but their products must meet ex ante specified quality standards. Sample inspection and internal grading will be used to distinguish high quality products from low quality products. Secondly, delivery rights are restricted in sense that the delivery amount for one member is almost ex ante determined.

Although Yu-heng watermelon cooperative is collectively owned by members, each member's claim on the cooperative seems to be clearly defined. Firstly, individual members' ownership is specified in terms of shares. Members are required to buy shares according to their planting capability/expected patronization. Secondly, the cooperative allows the members to participate in decision making according to shareholding structure. The one-member-one-vote principle is substituted by the restricted one-share-one-vote principle. The latter voting rights will motivate members to collect/commute information to participate in management

of cooperatives. Thirdly, shares can be redeemed when members quit cooperative. Thus, members can get back his financial stakes in cooperatives. These facts illustrate that the ownership title is not strictly collective. However, the ownership title can not be viewed as individual either. Property rights in the cooperative can not be traded outside the cooperative. When transferring the property rights within the cooperative, it is the board of directors, not the involved members, having the power to decide whether the transaction can be performed. In sum, the ownership title in the cooperative is a hybrid-form between individual one and collective one. 'Quasi-individual' may be a suitable name.

Ownership defines the allocation of formal authority. Figure 1 captures how formal authority is allocated in this cooperative. It resides with the member (representative) assembly. The (representative) assembly provides members with formal channels to revise organizational charters, elect and/or replace board members, determine finance and development plan, determine total share-value, per-share-value and the maximum number of shares purchased by one member, decide issues regarding merger, cooperation, etc. The member assembly will meet once or twice a year. When it is difficult for all members to come all together, members elect the representatives. The representative members constitute the representative assembly. Representative members have a three-year term and could be re-elected for many terms. Members participate in the (representative) member assembly by a restricted 'one-share-one-vote' principle. Voting rights are based on 'one-share-one-vote', but one member has at most 20 votes. The decision making process in the (representative) member assembly is by a qualified majority. A decision is reached when more than 2/3 of the votes are in favor.

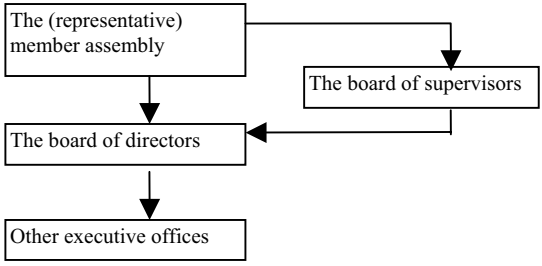


Fig. 1. Allocation of formal authority

Although formal authority clearly resides with the members and the assembly, real authority may reside with the others. Actually, many decisions have to be delegated to other groups. Normally, these groups include the board of directors and/or a group of managers. In Yu-heng Watermelon Cooperative, the board of directors is having effective control of the cooperative. The board consists of three members, and they are elected by the general assembly. The General Director is elected by the board and is the legal representative of the cooperative.

The board of supervisors is assigned with the rights to monitor the board of directors. The board of supervisors consists of 3 members elected by the (representative) member assembly. The supervisor members have a three-year term and can be re-elected for multiple terms. The supervisor members are expected to be independent from director members, thus, the charter clearly stipulates that the current director members and recently retired members and their relatives can not be supervisor members.

The allocation of real authority may vary widely within one formal organizational arrangement. This issue is illustrated by the outcome of a short questionnaire on the involvement of non-director members in decision making. The results are summarized in table 7.

First, members give up their decision rights regarding inputs and price to director members. The cooperative requires standardization of production by members. What inputs are to be used, and how/when to use them are contracted ex ante between the cooperatives and members. For the cooperative, this is a method to control quality of products; for the members, they like to give up such decision rights to gain technical guidance on how to produce and to acquire inputs such as fertilizers and seeds supplied by the cooperative at production costs. The members give up their decision rights regarding price because their production scale is small and the inefficiencies in information collection. For member growers, small production scale implies that it is costly to collect market information and it is hard to access markets. In contrast, the cooperatives have better capabilities to gather and analyze market information and a larger scale to gain access to markets.

Table 7. Allocation of decision power to non-Director members

	No extent or to a very limited extent	To some extent	To large extent
Input decision	×		
Quantity decision			×
Price decision	×		
Quality standards decision			×
Accounting system decision		×	
Advertisement decision			×
Technology training decision			×
Investment decision			×
Financing decision		×	
Recruiting decision		×	

Second, non-Director members are actively involved in making such decisions as quantity, quality standards, technology training, and investment. Quantity decisions are important for all members, because how much to produce will determine how much to contribute to the cooperative by buying shares. Normal members are motivated enough to participate in this decision. Regarding the high involvement of

normal members in setting up quality standards decisions, it reflects that quality is now an important attribute of commodities. Since cooperatives are organized around one or several similar products, formulating quality standards is an important measure to regulate members' behavior and reduce the adverse selection problem.

It is not surprising that members are strongly motivated to take technical training decisions. In China, small farmer growers are lack of technology. As the market condition changes from shortage of supply to abundance of supply, consumers demand high quality products or more customer-friendly products. To meet such changes, new technologies and technological innovations are required. Because small growers are keen on technological training, they are motivated to decide the training projects and training frequency. The result is that providing technology services is one of important measures to test the performance of Chinese cooperatives.

Third, financing decisions are mainly made by director members. This observation is a bit surprising, because normal members are expected to be cautious for financial issues in order to prevent risks and therefore are expected to tightly keep decision rights on financing. The reason is that normal members are too small to take a stake in financing and director members are normally larger growers who contribute a lot to financing issues. For example, the general director is a big grower, and his shares count for 20% of all shares.

In sum, in Yu-heng Watermelon Cooperative, ownership is restricted to members; members are required to buy shares; membership is closed; delivery rights are restricted; the ownership title is quasi-individual; director members have substantial power in deciding prices, inputs, finance, recruiting, etc; non-director members participate actively in making most decisions regarding quantity, quality, standards, investments, and technological training.

4.1.2 Income Rights

The cooperative will allocate the shares among members according to their planting scale, which in turn determine their expected patronization on the cooperative. Since the share allocation is set up before the production of watermelon, the expected patronization and consequently the payment for delivering for individual members are almost fixed. By combining delivery rights and share-holding policy, the cooperative aligns the principle of patronization-based allocation with the principle of share-based allocation. Since member growers are required to purchase shares on the basis of expected patronage, the usage and the capital investment are perfectly aligned.

Members have rights to share the yearly net returns of the cooperative according to shares. Generally, some parts of the share yearly net returns will be retained within the cooperative for further development and public use, and the rest will be allocated to members according to their shares. Yu-heng Watermelon Cooperative does not directly allocate returns to members, because there are sub-units called 'production bases'. These production bases are not only the units performing production tasks allocated by the cooperative, but also the units of accounting and al-

locating surplus. For each production base, the surplus to be allocated is the net returns in a production season deducted by the cost of production and management. The cooperative collects the risk insurance fund (10%) [10] and the public accumulation and public benefit fund (5%) from each production base; the rest of the allocable surplus in each production base is allocated to the base members proportional to individuals' shares. Since the shares are determined ex ante by expected patronage of the cooperative, allocation by shares/capital are perfectly aligned with allocation by patronage. In sum, members share the benefits (or costs) of the cooperative according to shares. The cooperative takes quality considerations into account in its pricing policy. It will pay different prices according to grading. In some cases, members are even punished (fined) to deliver bad products.

4.1.3 Complementarities Between Decision Rights and Income Rights

Table 8 presents the values of the attributes of the governance structure in Yu-heng watermelon cooperative. Decision rights are not uniformly distributed among the members. Director members have real control on important issues such as pricing, financing, investment screening, etc. Meanwhile, sharing benefits/costs among members are not solely based on membership. Income rights are confined by share contributions.

Table 8. Attribute choices in the cluster Governance

Income rights	Share-based	Membership-based
Decision rights		
Uniform		
Skewed	×	

In traditional cooperatives, benefit sharing based on patronization is essential for members, and capital returns are not important or deliberately limited to all members. In Yu-heng watermelon cooperative, ownership is allocated in such a way that benefit sharing based on patronization and benefit sharing based on capital contribution is perfectly aligned. Since members benefit from the cooperative proportional to their share contribution/expected patronization, a skewed allocation of decision rights encourages members either to contribute to the cooperative or to make knowledge / access to market channels available.

[10] Note that the risk insurance fund is used for reimbursement for heavy losses caused by the production and marketing of production bases and is allocated to each member's share account according to shares. For example, in 2003, one production base suffered a great loss from bad weather. The average loss for the members of this base was about 8,000 yuan per mu. The cooperative used the insurance fund to reimburse a part of loss of this production base. After reimbursing, members of this base lost only 2,000 yuan per mu.

4.2 Quality Control System

For agricultural products, as well as for other products, quality is an important attribute nowadays. The importance of quality is particularly pronounced for fruits and vegetables because these commodities are among the most likely to be observed and evaluated by consumers in their primary and unprocessed form. However, member growers have more information on quality of products than the cooperatives. Asymmetric information on quality may lead to over-supply of low quality products. Thus, quality management is essential for cooperatives. Markets coordinate quality mainly by incentives (such as prices), and hierarchies coordinate quality mainly by administrative controls (monitoring of the activities). We define the system a cooperative uses to direct behavior of its member users and to motivate them to act in ways that benefit the cooperative as the quality control system.

4.2.1 Quality Coordination Methods Through Multiple Production Stages

For the agri-business involved in multiple stages of production and distribution of products, vertical coordination on quality is necessary. Various methods could be used to vertically manage quality. We identify three quality coordination methods through multiple production stages in this cooperative: inputs control, production standardization, and unified packaging and marketing. Figure 2 illustrates the production stages involved by the cooperative and coordinating methods through these stages.

Although Yu-heng watermelon cooperative is a marketing cooperative, its activities are not limited to selling. The figure shows the cooperative is involved in multiple stages of inputs, storing, and processing and marketing/retailing. Yu-heng watermelon cooperative purchases inputs for members from outside companies. The procurement of inputs by the cooperative serves two purposes: firstly, quality

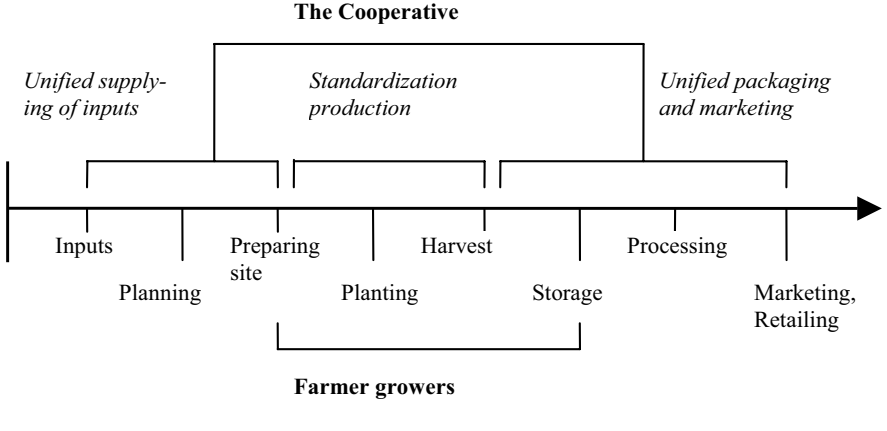


Fig. 2. Stages of production and coordination methods (adapted from Figure 9.3, Allen and Lueck 2003, 184)

of inputs is controlled; secondly, members acquire inputs at cheaper prices because the cooperative has considerable bargaining power towards input suppliers.

Main activities of member growers are preparing sites, planting, and harvesting. The cooperative influences member growers' activities by production standardization requirements. Production methods, technical guidance, and detailed planting descriptions of production procedures are formulated by the cooperative. All members receive a guidance book with detailed standardized growing procedures, specifying detailed requirements regarding seeds, fertilizers, production procedures, and technologies regarding different stages of production. In sum, the cooperative coordinates members' production in multiple stages of production by a unified supply of inputs, standardized production requirements, and unified packaging and marketing.

4.2.2 Other Control Tools and Incentive Tools

In addition to unified supply of inputs, standardized production methods, and unified packaging and marketing, several other control instruments are identified. One control instrument is team based production / inspection. By working together on rural lands, member growers supervise each other. Production and quality management is organized in a three-layer structure. Figure 3 depicts this structure. The board of directors, on behalf of the cooperative, rents rural land each year and assigns members to grow watermelons on it. These lands are called 'production bases'. In 2004, the cooperative had 8 production bases across the Zhejiang province. In 2005, the cooperative has 12 production bases. In each production base, member growers are grouped into 8 to 10 production groups. Each group hires farmer employees. The normal ratio is 1 farmer member to 3 hired farmer workers. These farmer workers are paid 900 yuan per month. Farmer members and workers grow watermelons together in a team. The cooperative provides inputs such as seeds, fertilizers and technical assistance. Farmer members provide technical guidance to farmer employees. At the end of one production cycle[11], each production base collects watermelons from its production teams. These watermelons are sorted, graded and packed with the cooperative brand. The board of directors determines prices based on the market situation. Subsequently, the cooperative assigns about two seller members to each production base. These seller members are in charge of selling watermelons for their production base.

Second, the products delivered by members are sorted and graded by the cooperative. By sorting and grading, the cooperative encourages members to adhere to ex ante specified quality standards. Third, members will be paid for their deliveries based on quality. Sample inspection, internal grading and sorting are used to measure quality differences, and then prices are paid accordingly. Quality-based pricing for deliveries is a salient incentive tool used by the cooperative to align interests of individual members with the entire cooperative.

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[11] The number of production cycles is 6, due to its technology and skills. Most enterprises have 4 production cycles.

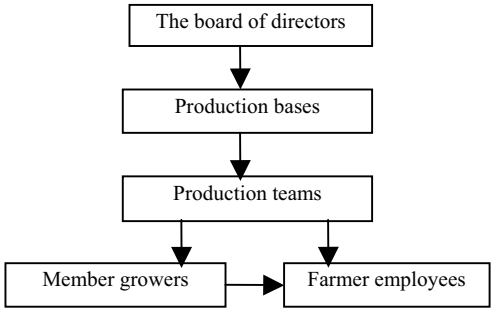


Fig. 3. Quality management in Yu-heng watermelon cooperative

Fourth, there is cash punishment for failing to deliver quality, even after the internal inspection process. It entails that a customer receives another watermelon when a bad one is returned. This instrument of quality control is explicitly used in the marketing policy for selling fresh watermelons. It is called 'double paying compensation'. Since the production team of each watermelon can be traced, all team members will be fined with a certain amount of money when losses occur due to delivering bad quality. A larger loss results in a higher cash punishment. This policy increases the incentives for group member' to monitor each other during production as well as incentives for team supervisors to strictly inspect sorting and grading.

4.2.3 Complementarities in the Quality Control System

In Yu-heng watermelon cooperative, the control tools include inputs control (i.e. unified supply of inputs), standardization, unified packaging and marketing, group production/inspection, sorting and grading, and incentive tools like quality-based pricing and cash punishment. The control tools are less efficient when pricing for deliveries is identical across all members. Tight control tools and flexible quality-sensitive pricing act in the same direction to manage members to adhere to quality standards and maintain the brand name. Table 9 depicts the choices regarding the attributes in the cluster quality control at Yu-heng watermelon cooperative. Compared with contract farming, the cooperative has low costs in enforcing quality. For example, field visits are not necessary, because members are motivated to supervise each other to prevent opportunist behavior. Low cost of control, complemented with high-powered incentives in terms of pricing, makes the cooperative efficient in managing quality in various stages of production.

Table 9. Attribute choices in the cluster Quality Control

Quality incentives Control	Yes	No
Tight	×	
Loose		

There are ongoing debates on whether incentives and control tools adopted in the quality assurance system are substitutes or complements. Hueth, et al. (1999) examined incentive tools and control tools used in the contracts used by first handlers of fruits and vegetables in California, and claimed that the instruments of control may be complements or substitutes, depending on the context. If the control instruments and the incentive instruments are complements, then their alignment produces synergies in the Quality control system. This is what we observed in this Chinese fruit cooperative.

4.3 Branding Strategy and Its Enforcement Mechanisms

A cooperative may choose different business strategies when selling products for members. For example, it may just pool all products delivered by members together and sell them by batches at wholesale markets; or, it may sell the products under one or several brand names. We define the branding strategy as the way in which products are marketed and sold under brand name.

The branding strategy determines the degree of commitment to ex ante specified high quality standards by a firm. To make this commitment credible, firms should have something valuable to loose. In Yu-heng watermelon cooperative, this is the private brand 'Yu-ling'. There are two mechanisms to signal quality to consumers: private brands and public certification (Raynaud, et al. 2005). The reputation capital of the owner is at stake under a private brand. The general director is a big watermelon grower and at the same time an expert in growing watermelons. Before he joined the cooperative, his watermelons were recognized as high quality. Many local people buy the watermelon from the cooperative because they trust the general director. His personal reputation is at stake in building up the reputation for the 'Yu-ling' brand. Under public certification, the credibility of a quality label relies on governmental enforcement.

Since the two mechanisms play similar roles in signaling quality, they may act as substitutes. However, in Yu-heng watermelon cooperative, public certification is not a substitute to private brands. It acts as a major method for building up the reputation of the private brand. The cooperative entered the certification process of the local government, which resulted in 'Yu-ling' being certified as 'Famous Brand in Zhejiang' by the Zhejiang provincial government agency in 2004. One reason for public certification being a complement to private brands is that the costs of public certification are low. Actually, local governments encourage cooperatives to participate in public certification procedures. Another reason is that public certification is used in advertising in addition to the private brand. The general director stated that the advertisement expenditure on newspapers, television, etc is 'very limited', while pubic certification or public rewards are necessary for promoting brands. Table 10 summarizes the observations regarding the cluster Strategy.

Table 10. Attribute choices in the cluster Strategy

Public certification	Yes	No
Private brand		
Yes	×	
No		

4.4 Complementarities Between the Three Clusters of Attributes

How to sell products and what products to sell are two questions closely linked with each other. The branding strategy distinguishes itself in terms of creating the commitment to ex ante specified high quality standards and creating a new market niche with higher margins. To guarantee the commitment and to earn high margins, tight quality control is essential in cooperatives taking the brand strategy. The adoption of these systems is facilitated by having centralized / skewed governance. Figure 4 depicts the three clusters of attributes in Yu-heng watermelon cooperative.

In Yu-heng watermelon cooperative, the quality control system is tight in order to maintain high quality reputation/image of the cooperative. It is tight in three ways. Firstly, there are ex-ante contracted quality standards, which are agreed

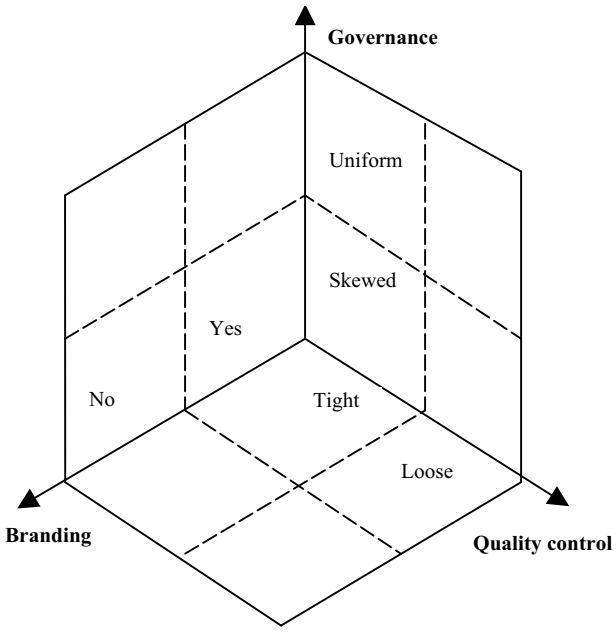


Fig. 4. Cluster choices in Yu-heng watermelon cooperative

upon by all members and which are stricter than the legal requirements regarding fruits. Secondly, many control tools are adopted to monitor and guide members through different stages of production. For example, input controls, production standardization, and group production/inspection are adopted to guarantee quality before and during the production process. Sample inspection and internal grading are used to measure members' efforts in meeting quality requirements. Failures of meeting quality requirements, which are not detected by the internal grading system, are dealt with by cash punishments. Since the bad products can be tracked down to production bases/groups, cash punishment provides a strong incentive to grow high quality watermelons. Thirdly, quality-based pricing is used to complement the control tools.

5 Governance in the Institutional Environment of China: Abilities and Relations

The above sections show that the development of Chinese cooperatives is characterized by two facts. Firstly, the number of new cooperatives increases rapidly all over China. The emergence and spread of new cooperatives in China is in line with the wave of the agricultural industrialization and global competition. For farmers operating in only one stage of the supply chain, i.e. the production stage, their benefits are endangered by the potential appropriation by other players in the supply chain. The cooperative is a safeguard to guarantee farmers' benefits by creating access to markets and produce value-added activities.

In the process of forward integrating into downstream activities, such as wholesaling and/or retailing, physical assets such as preservation facilities and wholesale markets are important. However, human assets such as knowledge/abilities regarding marketing and advanced technology are more important for Chinese farmers. Firstly, the agri-food markets are now characterized by oversupply, i.e. selling products is a problem for most farmers. Access to markets is decisive for farmers' survival. Secondly, in rural China, it is very difficult for farmers to get loans from business organizations such as banks because their scale is small and they may pose substantial risks for creditors. Only farmers with access to knowledge regarding technology and/or markets can get loans. These farmers are able to grow more products and/or sell more products. They distinguish themselves from other farmers by larger planting and/or selling scale. These signals give banks and other private creditors confidence that their loans will be paid back. So, human assets pave the way to build up physical assets.

Secondly, the governance structure of Chinese farmer cooperatives is a co-governance structure based on abilities and relations. The actual arrangements and operations are mainly based on the abilities of members. Trust and commitment derived from members' relationships underpins these institutional arrangements by confining control rights to core members.

The governance structure of Chinese cooperatives varies substantially. Members are heterogeneous in terms of farm size and supply of equity, and in some cases farmer members jointly own the cooperative with non-farmer members or firm members. The allocation of resources based on capital is pervasive at least in the coastal areas. There is usually a minority of core members (usually big shareholders) and a majority of normal members (usually users or patrons). Normal members enforce control rights by vote, voice and exit on the one hand, and delegate most control rights to core members on the other hand.

Farmers are heterogonous in terms of producing and/or selling capability even when they produce similar products. Farmers are stratified in terms of their abilities in producing products and in accessing markets. Some farmers have these abilities, while most farmers have not. However, farmers are in general in a weak bargaining position with other players in the agri-food supply chain, regardless their abilities to sell products and to perform value-added activities. Uniting farmers and pooling resources in the formation of cooperatives seems to be a suitable strategy for both types of farmers.

According to the incomplete contracting theory, it's efficient to allocate the control rights of cooperatives to the persons with superior access to market channels or having specific skills. In China, these persons are big farmer growers and/or sellers because they have either the abilities or relations to access downstream markets. They are granted substantial power in decision making decision in contingent situations. This is reflected in the skewness of the distribution of decision rights among core members/director members and normal members in the Zhejiang province. If there is a lack of big growers/sellers, agricultural firms and other non-farmers may be chosen and accepted by farmer members. The heterogeneity is much larger in this case, and the extent of the delegation of control rights to such core members is much larger. In some cases, normal members (pure farmer growers) only buy basic shares (i.e. membership shares) to get access to the cooperative, and most control rights are granted to big shareholders/core members. These diverse allocations of decision power among different stakeholders are confined by trust and commitment derived from the relationships among members. For small cooperatives, relationships play an important role in building trust and commitment. If core members have more close relationship with other members, normal members will be more willing to transfer (part of their) control rights to them. Thus, dominance of core members in ownership, and hence in residual control rights, is sustainable on the basis of kinships.

6 Conclusions

Since the late 1980s, China has seen the rapid development of new cooperatives in rural areas. In general, the development of farmer cooperatives in China is still in an early stage. A number of features of these cooperatives are revealed by our data. Firstly, cooperatives are small, and most of them are local. Secondly, the or-

ganization and strategy of farmer specialized cooperatives in China are deeply influenced by the institutional environment. Human asset specificity in terms of establishing and maintaining relations and access to markets seems to be most important in the governance of cooperatives. The leader of a cooperative is often the person with the ability to access to downstream activities. Physical asset specificity and countervailing power seem to be the driving forces behind governance structure choice in Europe and the USA (Bonus 1986; Hendrikse and Veerman 2001a, 2001b).

Thirdly, farmer cooperatives in China are rooted in the traditional Chinese culture centering on personal relations. Therefore, the origin and development of cooperatives are not only determined by members' abilities but also subject to the informal institutions based on relations. A very effective way to conduct the governance of farmer cooperatives in China may not be formal institution of, and commitment to cooperative concepts, but the personal relations or feelings. In a sense, the network of cooperative members is an effective mechanism to control the core members. This is in line with the findings of McMillan and Woodruff (1999) about the importance of inter-firm relationships. In short, both the control of core members based on ability and the constraints caused by members' relations can be regarded as the basic foundation for the co-governance of farmer cooperatives in China.

Fourthly, heterogeneity of members in farmer cooperatives in China is pervasive. There are various types of heterogeneity. Firstly, small farmer members and large farmer members co-exist in a cooperative. They are different in terms of abilities and social relations. Secondly, in some cooperatives, there are seller members who are specialized in selling member's products instead of production, and they may have different interests than pure farmer growers. A non-farmer or process firm can be accepted as a core member as long as he facilitates members' access to knowledge and/or markets. Core members/ director members are endowed with substantial decision power over normal members. Thirdly, in the cooperatives initiated by processor firms or other agri-food business firms, farmer members as well as non farmer members have decision rights. Fourthly, there are cooperatives with full-time farmer members and part-time farmers having different interests. Finally, members are heterogeneous in terms of education, age, and gender of members. The first three types of heterogeneity have been addressed in this article.

These observations raise a number of issues for further research. Firstly, do the results regarding the Zhejiang province extend to other provinces? Similarly, do the results regarding the watermelon cooperative extend to other cooperatives? Secondly, Hansmann (1996) has stressed the importance of the homogeneity of patrons in enterprises. The new cooperatives in the Zhejiang province exhibit a substantial heterogeneity in the membership. This raises the issue on structuring cooperatives in such a way that they accommodate member heterogeneity best. Thirdly, growth of the cooperatives is to be expected, even across provinces with different institutional settings. Will the members in the different provinces be treated the same? Fourthly, a great variety of the forms of cooperative organiza-

tions have been observed in rural China recently. The farmer specialized cooperative, which is the focus of this paper, is only one form of the spectrum of cooperative organizations. To what extent do other cooperative organizations differ from farmer specialized cooperatives? And, to what extent do these differences influence performance of each organizational form? This posts interesting research directions in the future work.

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